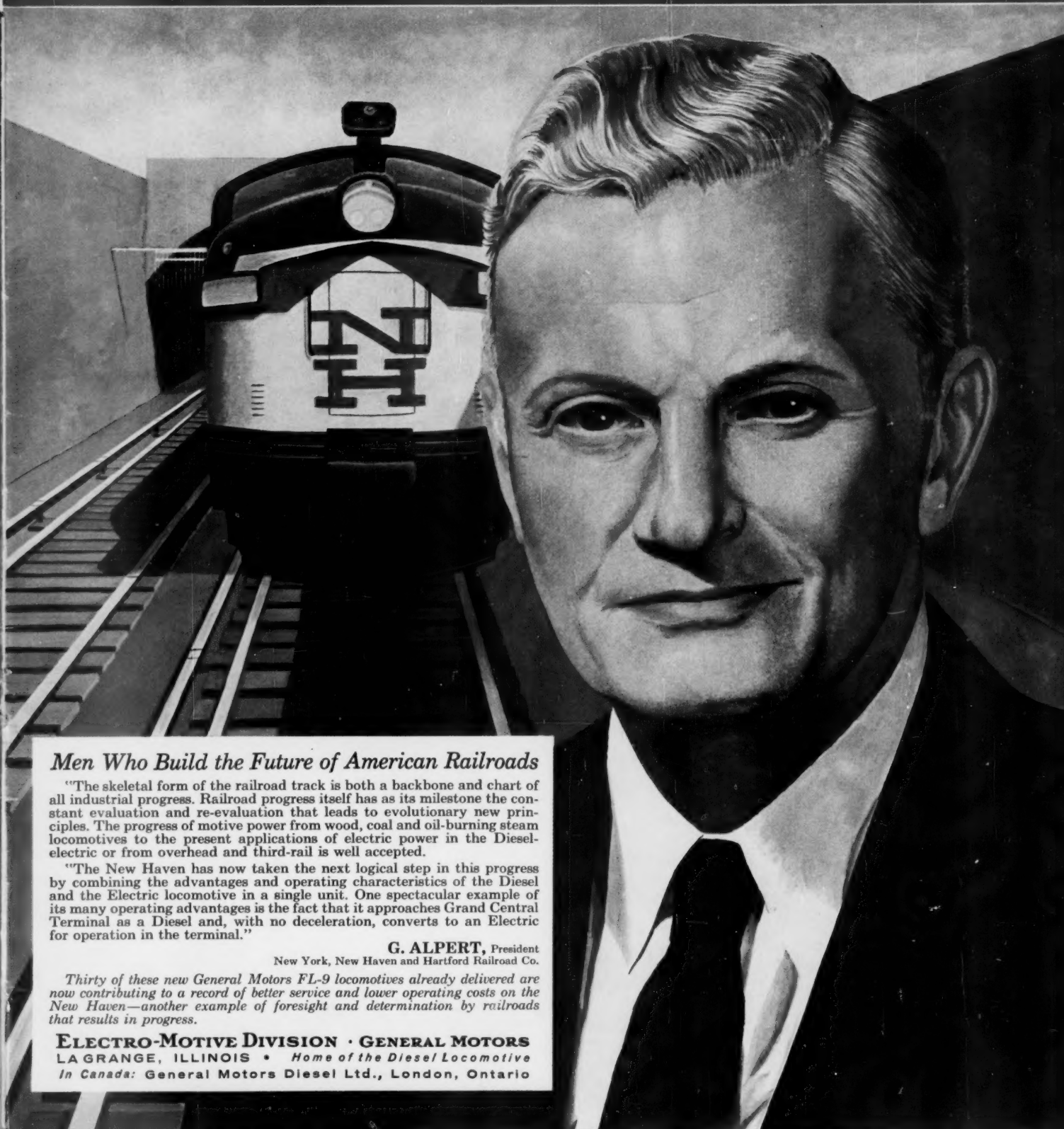


Milwaukee Finds New Uses For Aerial Photos

December 16, 1957

RAILWAY AGE *weekly*



Men Who Build the Future of American Railroads

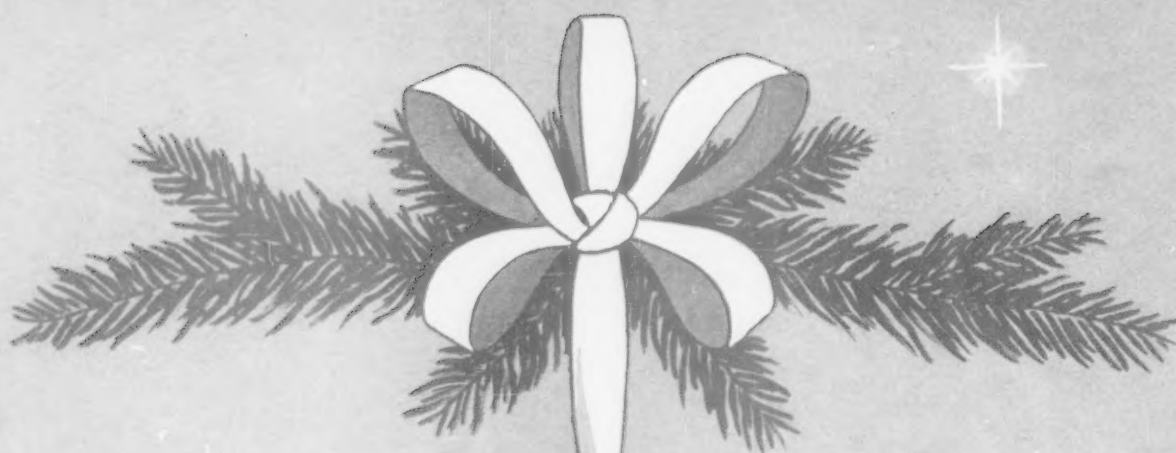
"The skeletal form of the railroad track is both a backbone and chart of all industrial progress. Railroad progress itself has as its milestone the constant evaluation and re-evaluation that leads to evolutionary new principles. The progress of motive power from wood, coal and oil-burning steam locomotives to the present applications of electric power in the Diesel-electric or from overhead and third-rail is well accepted.

"The New Haven has now taken the next logical step in this progress by combining the advantages and operating characteristics of the Diesel and the Electric locomotive in a single unit. One spectacular example of its many operating advantages is the fact that it approaches Grand Central Terminal as a Diesel and, with no deceleration, converts to an Electric for operation in the terminal."

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Thirty of these new General Motors FL-9 locomotives already delivered are now contributing to a record of better service and lower operating costs on the New Haven—another example of foresight and determination by railroads that results in progress.

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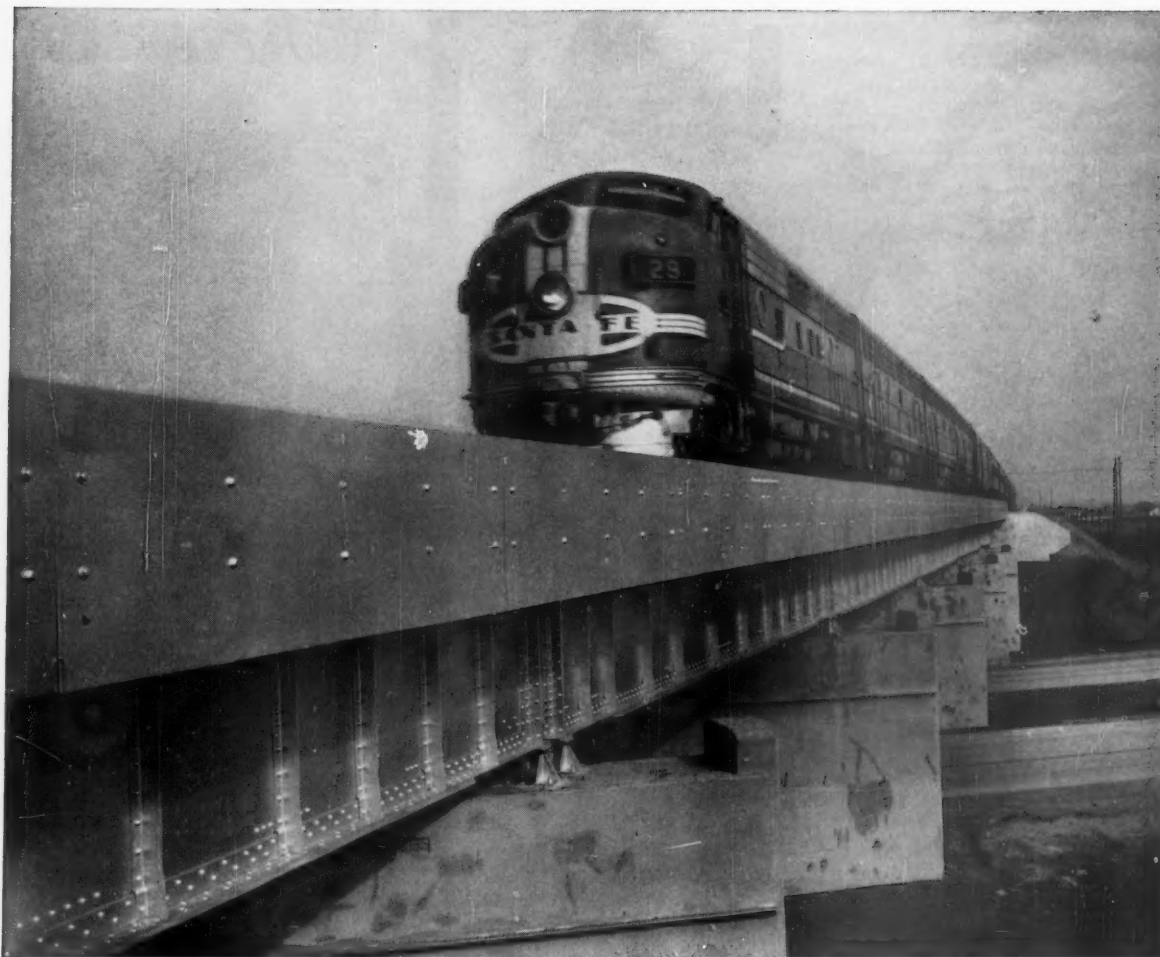


Holiday
GREETINGS

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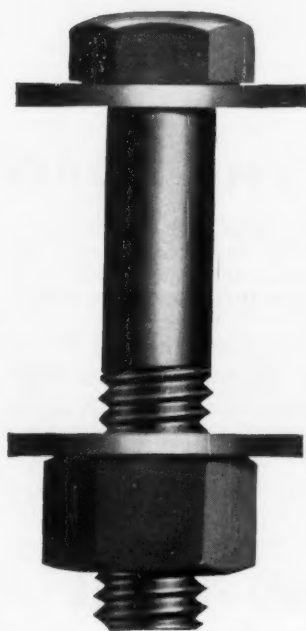
MANUFACTURERS OF RAILWAY

APPLIANCES SINCE 1894



Bethlehem High-Strength Bolts keep structural members tight in this new bridge for Atchison, Topeka and Santa Fe Railway.

High-Strength Bolts Stay Tight Despite Effects of Vibration



Severe vibration, the result of traffic on right-of-way bridges, often causes fasteners to work loose, resulting in a costly, time-consuming maintenance problem. But not when the structural members are connected with Bethlehem High-Strength Bolts.

With Bethlehem High-Strength Bolts on the job, low maintenance costs are possible because the joints are permanently tight—the bolts simply don't work loose. The bolts are installed with two hardened washers, one placed under the hexagonal head, the other under the nut. Then the nut is driven up on

the bolt by means of a pneumatic impact wrench, resulting in maximum clamping pressure.

Bethlehem High-Strength Bolts are made of carbon steel in lengths and diameters to meet every need for new construction or repair. They are also quenched and tempered to meet the requirements of ASTM Specification A-325.

If you would like to have additional information about Bethlehem High-Strength Bolts, all you need do is get in touch with the nearest Bethlehem sales office.

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ESSO DIOL RD 77—Specifically developed for the heavy-duty engines of modern locomotives, Esso Diol RD 77 assures peak efficiency and long, trouble-free engine performance—high standards that mean extra lubrication economy.

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RR trucking operations can be freep. 9

Supreme Court ruling upholds ICC in Rock Island Motor Transit case. Finds that subsidiary service need not be "tied-to-the-rails" in all cases. A separate ruling holds that adequate rail service in an area need not bar a trucker from starting competition.

Car fleet growing by 45,000 this yearp.11

New car purchases should outstrip retirements by that much, AAR spokesman predicts. PRR officer voices support for Symes Plan. He denies it would speed government intervention.

'PAT' — a fresh approach to piggybackp.14

A new container idea launched by Pullman-Standard and Trailmobile works with TOFC gear now in service. Most flat cars could use the equipment, but P-S has two special cars in the works. They'll be built to carry the Trailmobile-designed aluminum container or regular truck trailers.

How the C&NW gets more M/W work for less moneyp.20

It's no easy trick to trim a budget and lay more rail, more ties, and more ballast. But the Northwestern beat down its trackwork costs with a double-headed effort of tight supervision and all-out mechanization.

How the Reading saves man-hoursp.24

Radio—in locomotive cabs, in dispatcher and yardmaster offices, in automobiles and trucks—keeps the RDG's operations crackling. It saves time and speeds service. Five base stations at key locations frame the communications net.

New M-U electric cars go to work in Brazilp.29

Modern equipment does the job where the passenger traffic climb matches the steepness of the inland grades on the Santos A Jundiai. Here's a story of railroad rehabilitation. Objective: to make the road "a living economic unit."

How railroads can use aerial photosp.33

The Milwaukee's picture file figures to be 450 times better than a thousand words. Maybe more so, since the 450 bird's-eye views of the road's property are duplicated in color. Wanted for industrial development promotion, the photos are handy in maintenance and track-layout studies—and for other unexpected jobs.

The Action Page—Should U.S. do railroad research?.....p.54

Look at it from the angle of conserving fuel resources: the government's stake is obvious. Look at it from a defense viewpoint: here is government's biggest job. With billions spent for federal highway, aviation, and maritime development, private business



6,477 Wabash Cars Upgraded in 21 Months With Economical **ADM**

Freight Liner 810

CASE HISTORY #2: In 1955 the Wabash Railroad began upgrading boxcars with Archer-Daniels-Midland Freight Liner 810. They have upgraded 6,477 cars with Freight Liner in 21 months and report that their experience has been "most satisfactory".

Today 25 major railroads use this economical, consistently satisfactory plastic-and-fiberglass method to upgrade boxcars. Like the Wabash, these railroads find that Freight Liner can be used for patching, relining, and even for resurfacing stained flooring. It is especially good when cars must meet rigid sanitary regulations.

Versatile Freight Liner is easy to apply. A crew can be trained to use it in minutes. The Freight Liner plastic can be sprayed from a disposable can, facilitating easy clean-up. Most railroads operate the spray guns with air pressure from the readily available rip track or cleaning track air lines.

Let ADM technical service experts show you why the Wabash and other major railroads now use and recommend Freight Liner. Call or write, today, for a demonstration (without obligation) on your own siding.



Bad breaks like this one in the end of a boxcar are quickly and economically repaired with Freight Liner 810. Any crew can be trained to do the job with brief instruction.



First step in Freight Liner method of upgrading is to spray plastic around area to be patched, using air pressure from rip track air lines.



Here's the finished job after fiberglass cloth is put in place and a second coat of plastic is sprayed over the patch. Plastic dries in minutes, meets rigid sanitary requirements.

Archer- Daniels- Midland



732 INVESTORS BUILDING, MINNEAPOLIS 2, MINNESOTA

OTHER ADM PRODUCTS: Linseed, Soybean and Marine Oils, Paint Vehicles, Synthetic and Natural Resins, Vinyl Plasticizers, Fatty Acids and Alcohols, Hydrogenated Glycerides, Sperm Oil, Foundry Binders, Industrial Cereals, Vegetable Proteins, Wheat Flour, Dehydrated Alfalfa, Livestock and Poultry Feeds.

Week at a Glance CONT.

Current Statistics

Operating revenues, ten months	
1957	\$8,836,710,505
1956	8,787,491,636
Operating expenses, ten months	
1957	\$6,877,916,693
1956	6,726,548,826
Taxes, ten months	
1957	\$934,003,618
1956	953,933,641
Net railway operating income ten months	
1957	\$799,108,842
1956	896,498,491
Net income estimated, ten months	
1957	\$617,000,000
1956	716,000,000
Average price 20 railroad stocks	
December 10, 1957	63.35
December 11, 1956	96.40
Carloadings revenue freight	
Forty-eight weeks, 1957 ..	33,278,928
Forty-eight weeks, 1956 ..	35,203,955
Average daily freight car surplus	
Wk. ended Dec. 7, 1957 ..	40,271
Wk. ended Dec. 8, 1956 ..	6,197
Average daily freight car shortage	
Wk. ended Dec. 7, 1957 ..	34
Wk. ended Dec. 8, 1956 ..	4,115
Freight cars on order	
November 1, 1957	65,718
November 1, 1956	122,250
Freight cars delivered	
Ten months, 1957	84,639
Ten months, 1956	53,007

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in those fields benefits. Why not the same chance for the railroads through transportation research?

Short and Significant

Monorail 'break' near? . . .

All indications point to an order "in the very immediate future" for a "full-fledged commercial installation" of monorail in an American city, according to Murel Goodell, head of Monorail, Inc., Houston, Tex. Two cities (unnamed) are reported as prime prospects. Announcement of Monorail's progress status was coupled with word that Swedish financier Axel Wenner-Gren has purchased a controlling interest in the Texas company.

Go one way, return the other Jan. 1 on PRR-NYC . . .

The Pennsylvania and New York Central will begin honoring each other's round-trip tickets Jan. 1 between New York and nine midwestern cities. The move will permit passengers to reach their destination via one road and return via the other.

Frisco Puts in 'Incentive Rates' . . .

H. V. Cook, GFTM of the Frisco, said in a Tulsa speech that the Frisco is in process of putting in freight rates which will scale downward for loading in excess of carload minima. He sees device as a means whereby revenue per car can be increased, while giving shippers lower average rates, inducing them to use relatively more railroad transportation.

GN-NP merger study completed . . .

Completion of an operating study of the proposed GN-NP-CB&Q-SP&S merger will be followed by a study of the results by special committees of the Great Northern and Northern Pacific boards of directors. Comment on the contents of the report, GN President John M. Budd and NP President Robert S. Macfarlane declared, "would be premature at this time."

Westward ho the grain cars . . .

Loaded with milo for export, the cars are in a migration toward the Pacific Coast. Some grain belt shippers are worried because the Commodity Credit Corporation will soon start transferring stored wheat. They fear there won't be enough good cars in the wheat states when they're needed.

Three-port rate parity on imported iron ore . . .

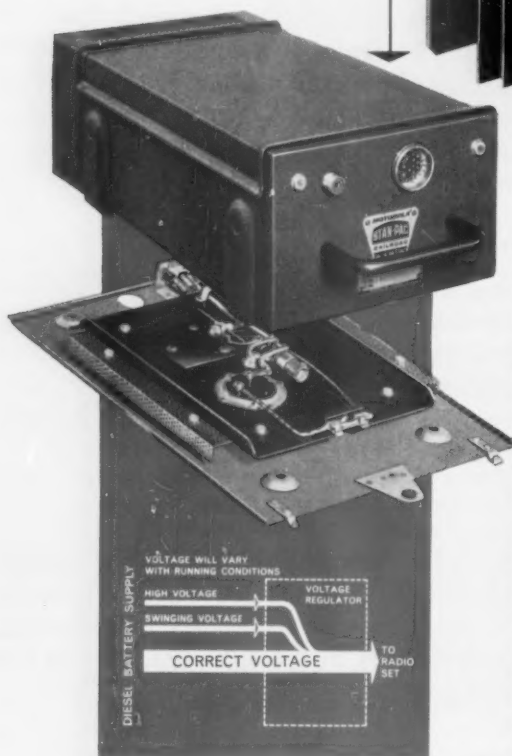
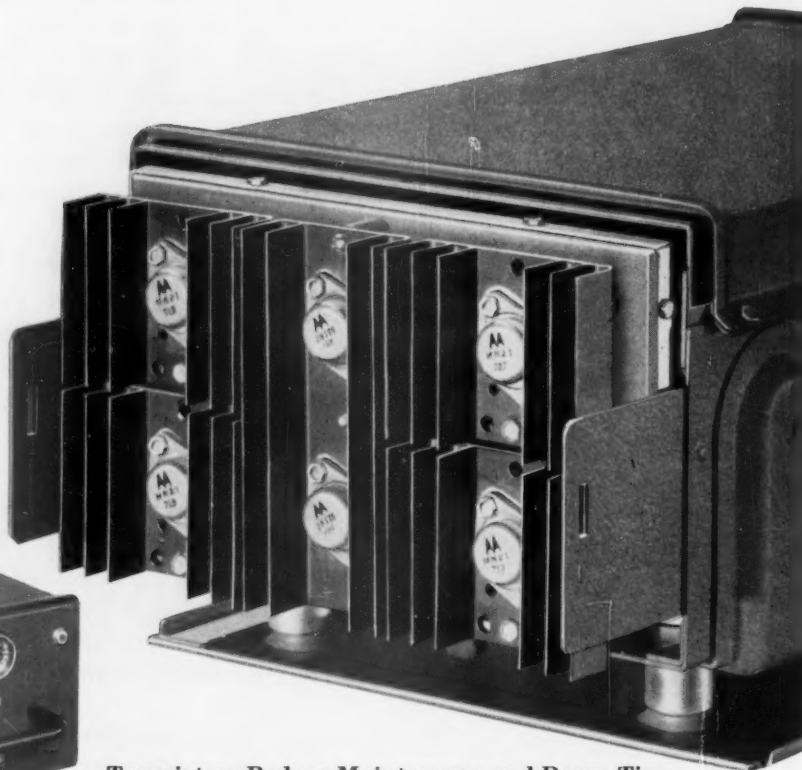
has been upheld by the United States Supreme Court. The Court sustained the ICC's 1954 decision which will give Philadelphia the same rates as Baltimore, and its 1956 decision which extends the Baltimore basis to New York. Baltimore rates have been lower than those out of the other two ports. Traffic at stake is imported iron ore moving to steel-producing areas in Pennsylvania, Ohio and West Virginia.

NEW TRANSISTORIZED 64 VOLT STAN-PAC RADIO



Completely transistorized power supply—back view (with cover removed) showing location of 6 transistors.

Transistorized voltage regulation—input voltages as high as 80 vdc are automatically regulated before being fed into the radio's power supply.



Transistors Reduce Maintenance and Down-Time

Here's another railroad first from Motorola. Now Motorola offers railroad radio with transistorized voltage regulation. Diesel voltages that range from 60-80 volts are no problem for Motorola's new 64 volt "Stan-Pac" radio. The built-in voltage regulator automatically holds the voltage at a constant value. Therefore, tube life is extended, operation is more stable and maintenance costs are reduced. That's the kind of engineering value you expect from Motorola.

Long Life Transistors Replace Vibrator

Transistors in this new radio reduce operating costs in other ways, too. "Stan-Pac" radio features a completely transistorized power supply. The vibrator is gone, and there are no expensive converters or rotary machinery. Installation costs are lowered; maintenance is simplified.

Get all the facts on "Stan-Pac" radio . . . the only railroad radio that offers transistorized voltage regulation and a completely transistorized power supply. Write today.



MOTOROLA RAILROAD RADIO

Motorola Communications & Electronics, Inc. • A SUBSIDIARY OF MOTOROLA, INC. • 4501 Augusta Blvd., Chicago 51, Ill.

RR Truck Operations Can Be Free

Supreme Court upholds ICC grant of operating rights to Rock Island affiliate without tie-to-rails—Also rules, in Schaffer case, that commission cannot deny a trucker's application for operating rights on ground that rail service is adequate.

It is now clear that the ICC can grant truck-operating rights to a railroad affiliate without imposing tie-to-rails restrictions.

It is also clear that the commission cannot deny a trucker's application for operating rights on the ground that rail service in the territory is adequate.

That's the gist of two decisions made last week by the United States Supreme Court. The court's opinion in the latter case should have the effect also of making the prospect of reduced rates a factor to be considered in passing upon an application for operating authority.

"The ability of one mode of transportation to operate with a rate lower than competing types . . ." the court said, "is precisely the sort of 'inherent advantage' that the congressional policy requires the commission to recognize . . . The commission asserts that it has always considered rates irrelevant in certification proceedings . . . yet with but one exception, it relies on administrative decisions involving applications by a carrier to provide service to an area already served by the same mode of transportation.

"Those decisions are entirely different from the situation presented here, where a motor carrier seeks to compete for traffic now handled exclusively by rail service. In these circumstances, a rate benefit attributable to differences between the two modes of transportation is an 'inherent advantage' of the competing type of carrier and cannot be ignored by the commission."

The railroad case, in which the commission was upheld, involved operations of Rock Island Motor Transit Company, subsidiary of the Rock Island. It was taken to court by trucking interests, including the American Trucking Associations, and the Railway Labor Executives Association.

The other case involved the commission's denial of Schaffer Transportation Company's application for authority to expand its common-carrier operations as a trucker of granite out of South Dakota and Vermont.

It was the failure of independent truck lines to provide complete service, particularly "peddle operations," which prompted the commission to ease restrictions on Rock Island Transit's services. The easing

permits so-called "all-motor" operations on several routes, including a Chicago-Omaha operation. The commission's decision was issued late in 1954, and it said the easing was an "exception" justified by the evidence, and was not to be construed as an abrogation of the tie-to-rails policy.

Truck routes involved were purchased from independent truckers and operated on an unrestricted basis by the RI subsidiary for several years prior to 1951. Then the commission, in a decision subsequently upheld by the Supreme Court, imposed the usual conditions which are designed to make railroad trucking operations auxiliary to rail service.

Transit then filed the application out of which the easing came. It was an application under the Interstate Commerce Act's Section 207 which provides for is-

suance of certificates on showings of convenience and necessity. Unlike the acquisition-of-control section 5 (2) (b), Section 207 calls for no special showing when applicants are railroads or railroad affiliates.

The commission's favorable action was based on its finding that Transit had made the required showing of convenience and necessity. ATA and the other appellants contended that the commission lacked authority for that finding.

Upholding the commission, the court concluded that Congress "did not intend the rigid requirements of Section 5 (2) (b) to be considered as a limitation on certificates issued under Section 207."

If the present interpretation leaves a "loophole" in the act, the commission has "shown no inclination to permit its use as such," the court added. Later on, it



Kids Take the Cake in 'Crusader' Birthday Celebration

Two-million miles. Three-and-a-half million passengers. All on a 90-mile run. That's the record of the Reading's "Crusader" which was to mark its 20th birthday in Philadelphia-Jersey City service December 13. It's shown here near Jenkintown, Pa. Built by the Budd Company as one of the first streamliners in the East, the equipment was fitted out with birthday

and Christmas decorations. Two cakes originally baked for passengers on the festive round trip were to be given to children from an orphanage and home for the blind at Jersey City and at Philadelphia's Children's Hospital. The Jersey Central, whose trackage the train uses into Jersey City, and the Budd Company participated in the project.

said there was no foundation for so construing Section 207 as to require "that any railroad operation in the motor trucking field be unprofitable. Observance of economic realities in ascertaining public need is no less due a railroad-owned motor carrier than an independent motor carrier."

The Schaffer case was one in which the commission called the available rail service "reasonably adequate," and went on to appraise the evidence generally as indicating that shippers supporting Schaffer were more interested in obtaining lower rates than in improved service. It is "well established," the commission added, "that this is not a proper basis for a grant of authority." Rejecting this idea, the court said:

"Viewing these conclusions in the light of the national transportation policy we find at the outset that there has been no evaluation made of the 'inherent advantages' of the motor service proposed by the applicant. That policy requires the

commission to administer the act so as to 'recognize and preserve the inherent advantages' of each mode of transportation. . .

"When a motor carrier seeks to offer service where only rail transportation is presently authorized, the inherent advantages of the proposed service are a critical factor which the commission must assess. How significant these advantages are in a given factual context and what need exists for a service that can supply these advantages are considerations for the commission. . .

"Adequate rail service is a relevant consideration, but as the commission has recognized, 'relative or comparative adequacy' of the existing service is the significant consideration when the interests of competition are being reconciled with the policy of maintaining a sound transportation system. . . To reject a motor carrier's application on the bare conclusion that existing

rail service can move the available traffic, without regard to inherent advantages of the proposed service, would give one mode of transportation unwarranted protection from competition from others."

The court also said it did not suggest that the national transportation policy is a "set of self-executing principles that inevitably point the way to a clear result in each case." It recognized that the principles "overlap" and "may conflict," thus making resolution the task of the commission. It sent the case back to a lower court because:

"There is no indication in the commission's findings of a conflict of policies. . . There is no finding that the authorization of the proposed service would impair the sound operation of the carriers already certificated. Nor has the commission properly evaluated the advantages urged by the supporting witnesses to determine whether the standard of public convenience and necessity has been met."

The court's opinion in this case was announced by Chief Justice Warren. A dissenting expression came from Justice Frankfurter who would have affirmed the lower-court ruling because he thinks the commission's ruling was within the scope of its powers.

The dissenting Justice suggested, however, that the court's decision might serve a useful purpose if it should lead the commission "to a more detailed and illuminating formulation of the reasons for the judgment that it reaches, even in that class of cases where Congress had relied on the commission's discretion in enforcing the most broadly expressed congressional policy."

The decision on Rock Island Transit's operations was also an 8-to-1 ruling. Justice Clark announced the opinion of the court. Justice Douglas dissented.

Watching Washington *with Walter Taft*

● **RETURN VISIT TO WHITE HOUSE** is planned for the committee of railroad executives which made the industry's December 5 presentation to a group of Administration officials headed by Sherman Adams, assistant to the President. Chairman William T. Faricy of the AAR said the committee will go back after the Administration group has had time to consider the presentation.

● **VERY NICE HOUR'S CONFERENCE** was what Mr. Faricy called the December 5 meeting. He gave no details, saying only that the railroad committee had explained the industry's situation which is "rapidly becoming critical." It asked that the Administration take a look at the effect of present government policies and actions in the transport field.

● **ANOTHER TACK** was under way in Washington last week at a meeting of some 20 top railroad officers. They were planning for the industry's presentation at forthcoming hearings before the Surface Transportation Subcommittee of the Senate Committee on Interstate and Foreign Commerce. The hearings on "the deteriorating railroad situation and its effect on the national transportation picture" are scheduled to begin January 13, 1958.

● **REPEAL OF TRANSPORT TAXES**, especially the 3% levy on freight charges of for-hire carriers, is expected to have high priority in this presentation—as it did at the White House conference. Complete repeal next year is the goal—a tough one to reach in view of the federal revenue situation. Minimum hoped for is gradual elimination of tax by cutting it 1% each year for three years.

● **CONSIST OF ICC** will continue unchanged. President Eisenhower plans to reappoint the two members whose terms expire at the end of this year—Anthony F. Arpaia and Rupert L. Murphy. The reappointments will be for full seven-year terms. Commissioner Arpaia has been a member of the commission since 1952, Commissioner Murphy since January 1956.

● **NATIONAL MEDIATION BOARD, TOO**, will keep its present membership. The White House announced recently that the President would reappoint Leverett Edwards for a new three-year term beginning February 1. He has been a member of NMB since 1950.

RPI May Extend Study Of Passenger Traffic

The Railway Progress Institute's passenger traffic research study may be extended "into the fields of marketing and merchandising."

A resolution approved at the RPI annual meeting in Chicago called for the additional research, provided that an initial presentation of the basic study of executive, operating and passenger traffic officers of the railroads [Railway Age, May 20, p. 52] "is favorably received." Preliminary findings of the 10-month study, RPI noted, "appear to be both provocative and promising."

In another action, RPI approved establishment of a member committee to study and report on possibilities for developing—in cooperation with the AAR and/or individual railroads—a presentation or series of presentations suitable for use before business, civic or other groups.

Two RPI committees—on transportation legislation and on freight car supply and financing—will continue an analysis of the eastern railroads' Railroad Equipment Administration proposal.

Car Fleet Growing by 45,000 This Year

Estimate made to Missouri-Kansas shippers; PRR officer says Symes Plan was devised because "realities" demand "drastic action"; denies it hastens federalization.

U. S. railroads will end up 1957 with a net increase of some 45,000 new freight cars.

This prediction was made December 6 to the Trans-Missouri-Kansas Shippers Board at St. Joseph, Mo. Board members also heard a Pennsylvania Railroad officer plug the "Symes Plan" for government aid in freight-car supply.

An industrial public relations man, Charles G. Arps of Allis-Chalmers, emphasized to the board that management needs to take a positive approach in relations with employees.

T. W. Flickinger, manager of the open-car section of the AAR's Car Service Division, told the board that new freight cars installed on the nation's railroads in the first ten months of this year totaled 76,300, at a cost of about \$650,000,000. These installations increased the railroads' freight fleet by 38,400 cars, about 41,800 cars having been retired in the period, he said.

Ownership Up—"At the average monthly rate of car installations so far this year," he informed shippers, receivers and carriers of freight attending the meeting, "we should end 1957 with a net increase in ownership of about 45,000 cars."

Mr. Flickinger said the increase in the freight-car fleet in the 10-month period represents a gain of 28,000 cars on the eastern and southern roads and approximately 11,000 cars on the western roads. Included in the increase in the freight car fleet are 12,000 box, 7,745 covered hopper, 16,700 hopper and 760 flat cars.

Turning to the freight car situation generally, he reported that there had been a sizeable surplus of freight cars throughout the year, ranging as high as 29,035 daily. The average daily surplus has been 14,271 cars.

"These surplus freight cars, in terms of capital investment, mean the railroads have had throughout the year about \$120,000,000 worth of freight car equipment idle, half of which represented box cars," Mr. Flickinger continued.

Pointing to the extent inflation has increased the cost of building new freight cars, he emphasized the average cost has more than doubled since the end of World War II.

"The new car costing a minimum of \$8,500 today replaces one costing \$2,500," Mr. Flickinger added. "To raise the difference to merely replace a freight car being retired, a railroad must earn \$12,500 before taxes."

The railroad officer pointed out that while new capital costs the railroads a

minimum of 5 per cent, the carriers' earnings today average less than 4 per cent, which explains the "troublesome situation" the railroads face in trying to modernize and expand their rolling stock and equipment.

"Nevertheless, railroads have always had and still do have faith in the future of our country, and are going right ahead with their program for the building of new freight cars and locomotives and for improvements of their plants generally," Mr. Flickinger concluded.

A last-minute addition to the program brought P. D. Fox, PRR assistant vice-president of finance, to the TMK meeting to explain the proposal by his road and a number of eastern lines under which the federal government would lease rolling stock to railroads.

"The immediate reaction to this plan inevitably seems to be that 'we want less of government in business rather than more.' The eastern railroads subscribe to that principle. However, realities dictate drastic action at this time," Mr. Fox said.

"The greatest danger to the industry is

that if it is not equipped to take care of the needs of the country in times of national emergency or to take care of the peacetime needs of the shippers and the public, the government might well use this as justification for nationalization.

"Therefore, in principle, we are all in agreement. None of us wants government in business. The only question is that of mechanics as to how to prevent nationalization."

Mr. Arps declared that management has the duty and responsibility to bring to employees the realities of the business picture. He said that if management's message is factual and truthful, employees will realize that business' goal is identical with theirs.

"We can justify our reputation as humanitarians if we just don't regard the worker merely as a tool of production," Mr. Arps said.

The TMK Board's first-quarter prediction is for an overall decrease in carloadings in its territory of 1.5%. Increases should range from 1.1% for lime and plaster loadings to 6.5% for coal and coke and 7% for grain. The board foresees a decline in loadings of 15 commodities, sharpest of which is 44.2% in ore and concentrates. Most of the eight commodities for which increases are predicted move in heavy volume, the board noted.



Latest CNR Spur Line Is Ready for Traffic

Cost of the just-opened Canadian National 23-mile Heath Steele spur line in Northern New Brunswick was \$3,000,000. View shows some of terrain through which line was built. The spur, serving a rich mineral

area of the province, is expected to carry each year about 120,000 tons of lead, zinc and copper concentrates—as well as pulpwood and other forest products from expected lumber operations.

Shields—'Can't be pessimistic'

"Unless business in 1958 should be far less than predicted by most forecasters, we should do as well as we did in 1956—which certainly was not a bad year. . .

"As long as we can keep getting new industries on our lines we will not suffer much from a reduced traffic trend. . .

"The overall railroad scene is complicated by an ever-changing economy and problems peculiar to the industry. They

include the present excise tax which should be repealed; other heavy discriminatory taxes; the cost of highway separations; the antiquated regulatory patterns; subsidies to other modes of transportation; grossly exaggerated awards for personal injuries; and the multiple requirements for accounting and reporting to the federal government."—*R. N. Shields, P&WV, to the N. Y. Security Analysts.*

Gordon—'Sins of the fathers'

"There is no one clear-cut formula for the operations of the Toronto [and presumably, other] terminals. Transportation by truck, bus or automobile, or train should be recognized as forming one unified whole. . .

"If economic expansion had not taken place, a major revision in the transportation system would not be necessary; and the more necessary it becomes, the more it will cost. . .

"No agency of transportation has a bottomless purse; and the cost of providing service must be considered in relation to the price that will be paid for it. . .

"Compromises will have to be made in terminal arrangements because expropriation of land for railway use is already out of the question in key areas by reason of past failures to reserve it against other uses."—*D. Gordon, CNR, to the Toronto Railway Club.*

Shoemaker—'Real responsibilities'

"Who has the transportation responsibility, the economic responsibility for providing service which does not pay its way but which the public insists is vital to its well being? . . . Practical actions will improve the situation:

"State authority must permit a modification of train service to that which is essential. . .

"Public authority must permit reasonable fares. . .

"Tax relief is mandatory. A reasonable place to start is the elimination of taxes on all passenger-used tracks and facilities. . .

"The last alternative should be subsidy."—*P. M. Shoemaker, DL&W, to the Summit, N. J., Junior Chamber of Commerce.*

At Pittsburgh—'Costly advantage'

"Proponents of a Lake Erie-Ohio River canal say we need it to take advantage of the St. Lawrence Seaway. They quote a cost figure that is already six times the amount originally authorized for the Seaway. That's like buying a new automobile to take advantage of a free set of tires. . .

"If inland waterway transportation is economically sound, it should pay its way. . . If it is not economically sound, it cannot be made so by transferring its costs from the users to the taxpayers."—*Fred Okie, B&LE; J. W. Barriger, P&LE; M. S. Smith, PRR, in a joint statement.*

C&NW Depot Drive on 2nd Front

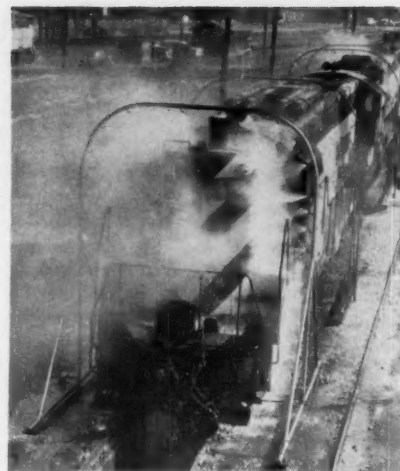
Chicago & North Western's drive to drop unneeded station services has crossed the border into Minnesota. C&NW started its program in South Dakota last month (Railway Age, Nov. 18, p.9) with a declaration that the move was "part of a larger plan" which would be extended throughout North Western territory.

The road's new petition—filed at noon last Thursday with the Minnesota Railroad and Warehouse Commission—was the first extension. It set up an even more am-

bitious centralization proposal than that introduced in South Dakota. C&NW said it has 94 one-man stations in Minnesota; 89 are involved in the current plan.

North Western is asking the commission for authority to set up a centralized agency plan in which 39 stations would handle the business. But, in the event "expected economies in the central agency plan fail to materialize," the line also asked authority to abandon any or all of the stations.

C&NW's petition charged that agents at



'Automatic Washer' for C&NW

Chicago & North Western is using a new high-pressure washing system at its Chicago shops, eliminating the hand-washing previously required by its suburban service locomotives. Irregular contour of the engines, C&NW found, interfered with washing in conventional revolving-brush machines. The new device is a series of hoops which sprays detergents, mild acid solutions and water on the locomotives. Underbody components get doused with a special chemical to loosen dirt and grease, with a final rinsing of water under high pressure.

its one-man stations "are required to actually work an average of only 16% of the time they are on duty." In some stations, the road said, agents are on duty eight hours a day, five days a week, although the line handles only one train a week.

The carrier also pointed out that operations in Minnesota "have resulted in a substantial deficit during the last five years. The maintenance of unnecessary services at one-man stations contributed to a net loss of approximately \$3,350,000 in its (C&NW's) Minnesota operations in 1956."

Improvements in service, North Western added, require "funds that can be made available only by the elimination of useless expenditures that benefit no one."

C&NW operates some 1,025 miles of line in Minnesota. Many of the one-man stations cited are on branch lines, which account for 40% of North Western mileage in the state.

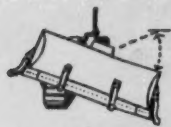
Mortgage Broker Studies Role in RR Real Estate

A new approach to plant location along railroad rights of way may take shape in coming months.

George W. Warnecke, one of the nation's top mortgage brokers and president of his own firm, told Railway Age he does not believe present "tight money" conditions will have a major effect on plant relocation in 1958.

(Continued on page 47)

NEW! THE CAT* NO. 7G BULLDOZER



Blade tilts 3' to either side!

Teeth slice through hard materials!



Blade tips through a $16\frac{1}{2}^\circ$ arc!

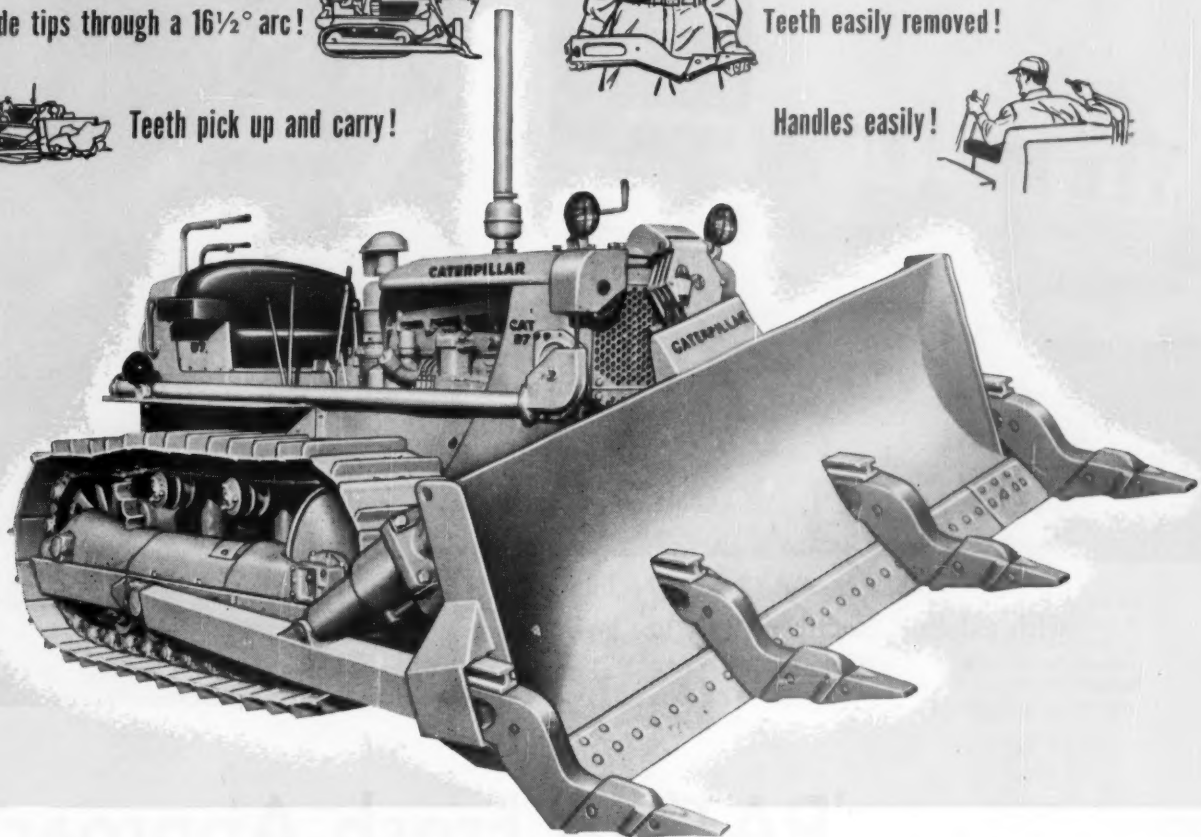


Teeth easily removed!



Teeth pick up and carry!

Handles easily!



'DOZER AND RIPPER IN ONE

The brand-new Caterpillar No. 7G Bulldozer is a completely different type of bulldozer. The amazing tilt-tip action, and its four heat-treated cast steel teeth, are an entirely new concept in 'dozing. The Gyrodozer is both a 'dozer and a ripper.

YOU'LL GET HIGHER PRODUCTION

The Gyrodozer rips through hard or frozen materials. Its 23" teeth not only pry out boulders but pick 'em up and carry 'em away. In rocky soil, the wedging action of the teeth surfaces small rocks for scooping up by the 10' 10" blade. On the really tough jobs, the tractor's full horsepower can be put behind a single tooth. The Gyrodozer is ideal for uprooting trees and clearing an area in a hurry.

EASY TO OPERATE

A Cat No. 25 Cable Control raises and lowers the 'dozer and a front-mounted No. 44 double-valve Hydraulic Control tips and tilts the blade. The operator never needs to leave his seat to make a blade adjustment.

GET FULL DETAILS

on the revolutionary new Gyrodozer from your Caterpillar Dealer.

Caterpillar Tractor Co., Peoria, Illinois, U.S.A.

CATERPILLAR*

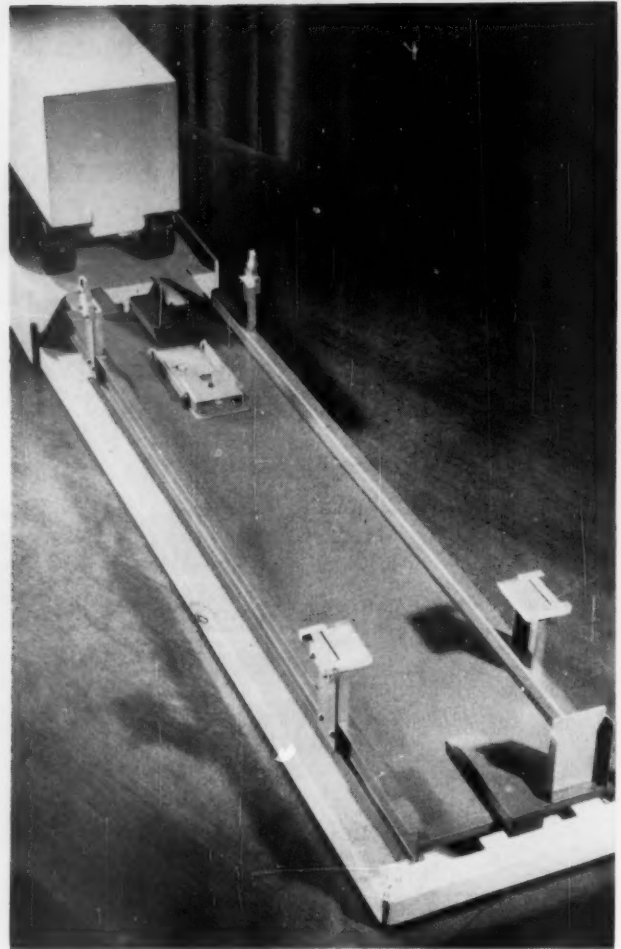
*Caterpillar and Cat are Registered Trademarks of Caterpillar Tractor Co.

**WANTED—
THE HARD WORK**

How 'PAT' Works ➔

- 1 CONTAINER-CHASSIS combination is backed onto car equipped with four hinged support piers and tie-down stanchion. As rig is positioned, slide plates at rear corners of container engage piers at rear of car. When container is spotted, support plates at front are positioned, and rig is moved forward to allow container to rest temporarily on them.

Pullman-Standard and Trailmobile are taking a new tack in piggyback. They've developed a container plan that promises great flexibility because it can be handled with existing facilities. Costs are low.



'PAT'—A Fresh Approach to

A new freight container system designed to provide a high degree of flexibility, especially for railroads already engaged in standard trailer piggyback operations, is being announced by Pullman-Standard and Trailmobile.

These two subsidiaries of Pullman, Inc., have applied for patents on what they call "PAT" (Pullman And Trailmobile), a container system which can use existing piggyback ramps, tractors and flat cars. Or, if desired, the demountable containers can be handled by fork-lift truck or overhead crane. Semitrailers and containers can be end-loaded indiscriminately onto a string of identical cars.

Most existing flat cars could be equipped for use with the "PAT" system by adding special support piers at each corner. Pullman-Standard has, however, designed two new flat cars specifically with the re-

quirements of the "PAT" system in mind. One car is of standard deck height, while the other utilizes 28-in. wheels and a special bolster to reduce the deck height to 2 ft 10 in., providing, Pullman-Standard says, sufficiently lowered overall height to allow trailers and containers to negotiate any reduced clearance in the U.S.

Clearing Tunnels

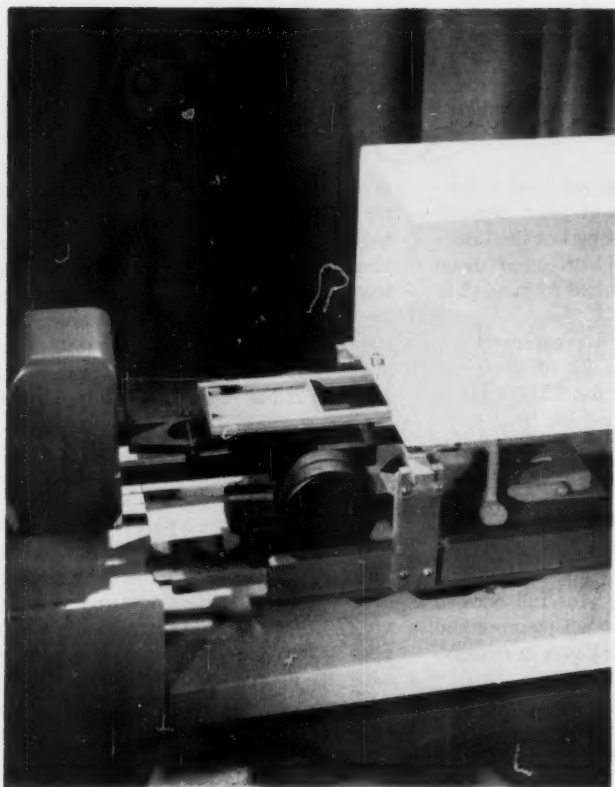
The standard-height car could be built to any length, but Pullman-Standard recommends a length of about 52 ft as "most versatile." Length of the low-level car would be restricted to 48½ ft because of lateral tunnel clearances. Using a collapsible trailer tie-down stanchion, the standard car will handle a 45-ft trailer or container and the low deck car will take a 40-ft load. A 45-ft trailer could be loaded

on the low-deck car if chain tie-downs were used.

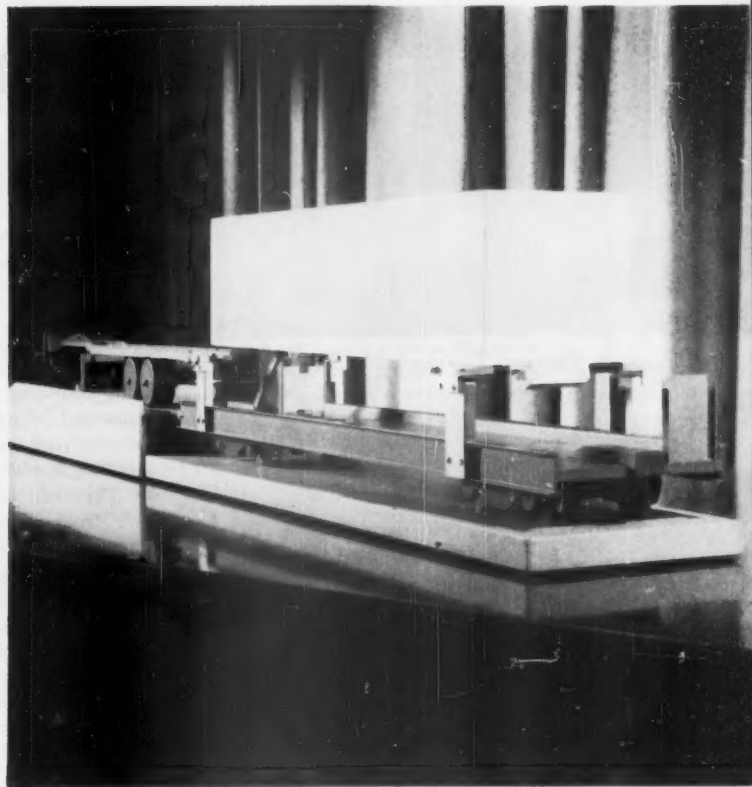
Equipped with stanchion and container tie-downs, the car will cost less than \$9,900, Pullman-Standard says.

Trailmobile's part of "PAT" is the combination of an aluminum container and a skeleton underframe with tandem axles and air springs. When mounted on its chassis, the container could be handled by a standard tractor. "Target price" for a 35-ft aluminum container with a payload capacity of 50,000 lb has been set at \$3,400, and for the chassis at \$3,100. Total weight of this combination would be about 11,000 pounds.

Pullman-Standard and Trailmobile have "PAT" components under construction and are arranging for tests. A color motion picture has been made to demonstrate the system.

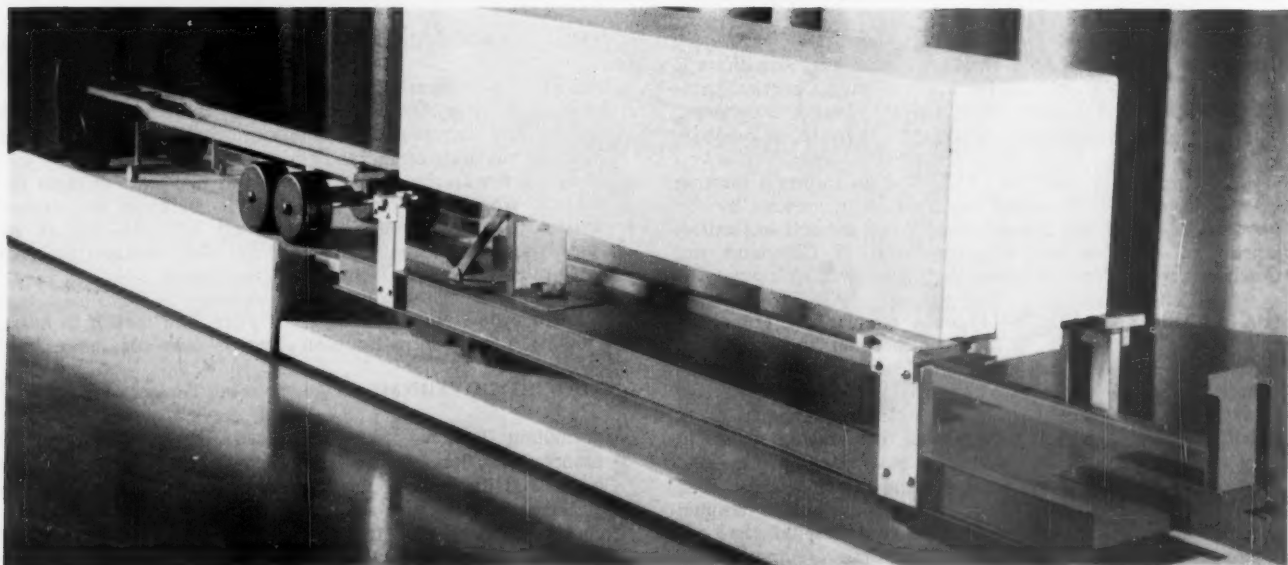


- 2** CHASSIS is unlocked from container and air is exhausted from springs, lowering container into final position locked to rear supports. Tractor pulls chassis from beneath container. Trailer hitch is raised, engaging king pin and lifting front of container off front support plates. Thus supported on stanchion and rear piers, container is ready to roll.



- 3** LOCKED TO CAR, container has center of gravity about 1 in. higher than full trailer would have. Unloading is reverse of loading process. Addition of support piers at center of car would allow handling two shorter containers, or boxes could be side-loaded with lift truck or lowered into position by overhead crane. Special car is shown; existing cars could be used.

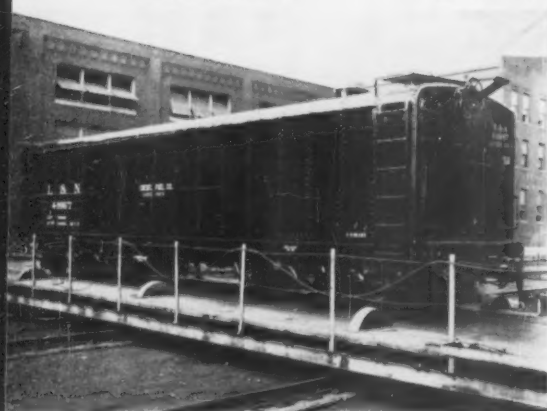
Piggyback and Container Problems





▲ BEFORE

▼ AFTER ▼



Why Tenders Weren't Scrapped

Dieselization in 1956 only put a temporary stop to the use of giant capacity tenders that were once a part of the Louisville & Nashville M-1 high speed steam freight locomotives acquired from 1942 to 1949.

In an eighteen month program at the South Louisville shops, 22 of these are being converted. Space for 22,000 gal of water and 25 tons of coal has been made over into oil tankers with a capacity of 26,000 gal, and a light weight of 140,800 lb. They will be used to transport diesel fuel from commercial outlets to L&N shops and yards. Parked at outlying points, they will eliminate wayside installations, empties being exchanged for full ones so they can go back for more. This procedure reduces use of rented tank cars in refinery-to-storage service.

The original tenders had cast steel water bottoms, mounted on 6-wheel trucks having 6½-in. by 12-in. roller-bearing journals and clasp brakes. The conversions consist

in cutting off the coal boards, installing tee iron carlines and extending the turtle-back roof the entire length of tank. Running boards and safety appliances are to box-car standards. The drawbar pockets are adapted to permit installation of a standard draft gear, with the cheek plates and strikers being fabricated by welding and attached without making any holes in the frame.

Load Top, Unload Bottom

The car is equipped with two sets of AB brakes, each operating the original 14-in. truck mounted cylinder. The hand brake is attached to the cylinder push rod. A transverse sump, with 4-in. outlet valves each side, is provided for bottom unloading, while the fill openings are located over the sump so that top unloading may also be employed. According to L&N spokesmen, these cars are among the largest railroad tankers in the world.

Railroading



After Hours with

Jim Lyne

GETTING TO SEE THE BOSS—They tell me that Dinty Moore who heads public relations for the GN got some suggestions from his staff that they weren't seeing him as often as they'd like to. So Dinty set aside a regular period daily when he is available—and he has a conspicuous sign, reading "ACCESSIBLE," that he hangs out during this period.

TRAIN-OFF TROUBLES—There is a new angle on the old story of the public service commission hearing on a train abandonment, where the opposing witnesses all came to the hearing by private automobile. Here's how it goes:

A few weeks ago the Ohio PUC had an informal meeting of proponents and protestants on train abandonments by the New York Central and Pennsylvania. When the roll was called, representatives of municipal governments of Cleveland and Cincinnati were absent, because the planes weren't running.

HIGH HOSPITAL COSTS—I got a circular the other day from a hospital to which I've occasionally made a small donation. They suggested I up the donation because services to non-paying patients that cost them \$100 a few years ago now cost over four times as much.

I asked a registered nurse why it is that inflation seems to have hit the hospitals harder than almost anything else—and she said so-called "hospitalization" is the principal cause. The fact that so many people have the prepaid right to hospital care, encourages a lot of them to demand hospital service—when, otherwise, they'd do their doctoring at home. And

crowded hospitals put hospital managements in a "seller's market"—under little pressure to curb costs.

I had been hoping that "hospitalization" was going to be the U.S. answer to socialized medicine—but I wonder if it's really working out that way. This is a question of importance, not only to every railroader, but to everybody else as well.

THE "RAILWAY RAGE"—Some anonymous joker has put out a mimeographed sheet with this heading, evidently intended to spoof us for our "Outrage" issue of *Railway Age* (October 7). This comedian, whoever he is, not only sent us a copy of his witty work, but has mailed it around to a lot of railroad people too.

As usual with argufiers, the author of this piece changes the subject. We showed how the governmental cards are stacked against the railroads in a large variety of ways, but all he does is to get very funny about the railroads' slowness to make joint rates with other forms of transportation.

Anyhow, from this and other evidence, it is quite clear that a lot of people read our "Outrage" piece, and took it to heart. And it seems to have troubled some of their consciences too.

TOO-BIG GOVERNMENT—I note a Timken ad in "National Review" magazine—not promoting Timken products. Instead, the ad questions the economic wisdom of the federal government's getting into a lot of activities that could be done better locally. To my way of thinking, there isn't any more important subject. Once you concede "federal aid" to one pressure group, then everybody else wants it—and is entitled to it, too.

Rolling Steel Doors

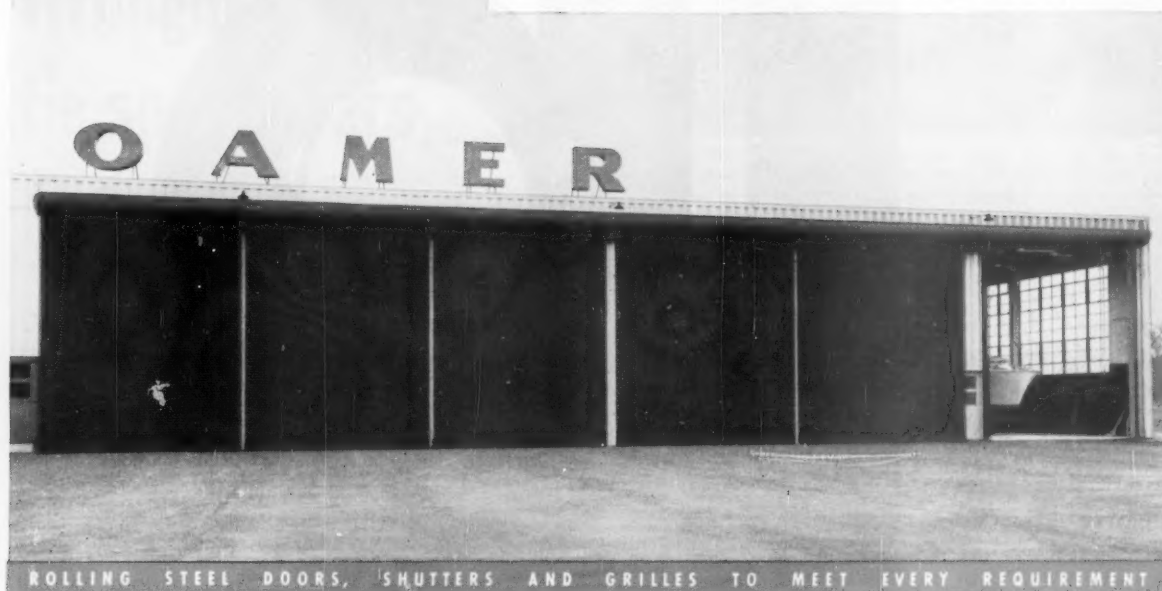
Manually, Mechanically or Electrically Operated

Here is another multiple door installation where only rolling steel doors could meet the operating and security requirements . . . because, the six doors illustrated below are installed in openings at the ends of six production lines where operating space and positive protection against intrusion were primary considerations. Sixteen other Mahon Rolling Steel Doors are installed in this new, modern boat-building plant. No other type of door can match the space saving compactness and the operating convenience of a good, quick-opening, quick-closing, power operated rolling steel door . . . the vertical roll-up action is fast, requires no usable space either inside or outside the opening—no overhead tracks or other obstructions to restrict headroom and interfere with crane handling adjacent to the door opening. And no other type of door can give you the positive security, firesafety and permanence which is an inherent advantage in Rolling Steel Doors . . . all-metal construction reduces maintenance to a negligible factor, and assure a lifetime of continuous trouble-free service. When you buy a rolling steel door, it will pay you to check specifications carefully . . . you'll find that Mahon Rolling Steel Doors are built better to give you better service over a longer period of time—for instance, the galvanized steel in Mahon curtain slats is BONDERIZED and DIP-COATED with synthetic enamel which is baked on at 350° F. prior to roll-forming. This is just one of the extra-value features of Mahon Rolling Steel Doors . . . comparison will disclose many others that add up to a much better investment. See Sweet's Files for information, or write for Catalogue G-58.



THE R. C. MAHON COMPANY • Detroit 34, Michigan

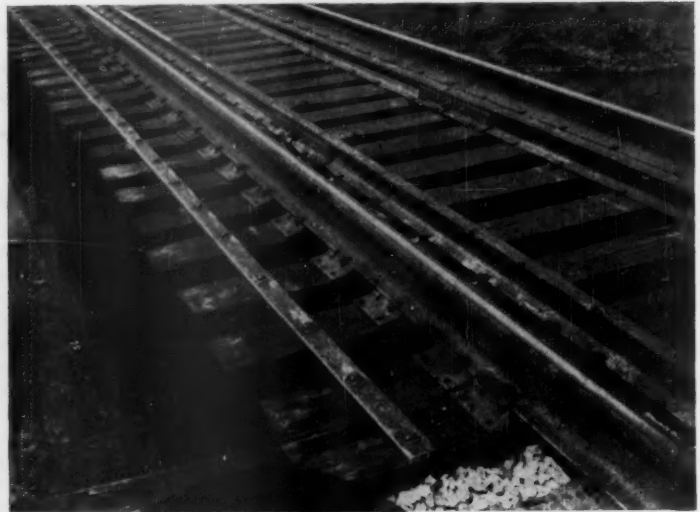
Sales-Engineering Offices in Detroit, New York and Chicago • Representatives in Principal Cities
Manufacturers of Rolling Steel Doors, Grilles, and Automatic Underwriters' Labeled Rolling Steel Fire Doors and Fire Shutters; Underwriters' Rated Fire Walls; Insulated Metal Curtain Walls; Electrified M-Floors; Acoustical and Trough Forms; and Steel Roof Decks and Long Span M-Decks.



Six of Twenty-Two Mahon Rolling Steel Doors installed in a new plant for the Roamer Steel Boat Division of Chris-Craft Corporation, Holland, Michigan. Owen-Ames-Kimball Company, General Contractors.

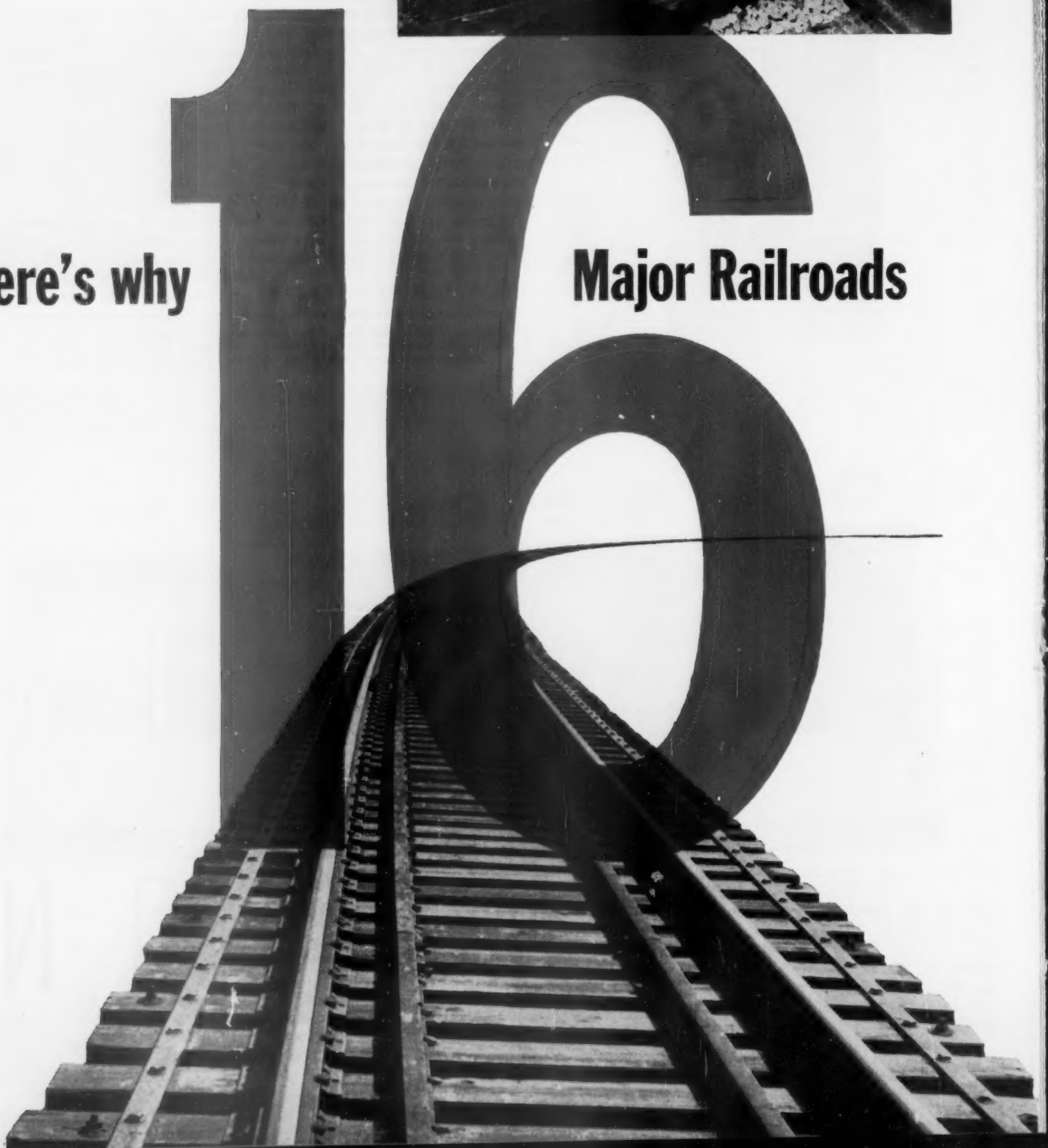
MAHON

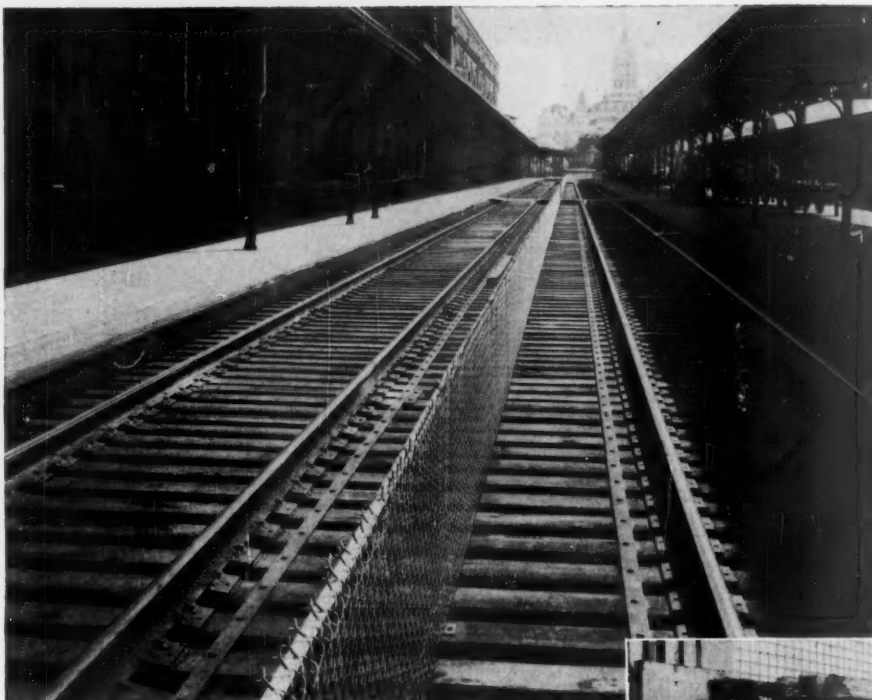
These wrought iron tie spacers minimize maintenance
on miles of track on major railroads like this one.



Here's why

Major Railroads





This typical installation shows wrought iron tie spacers in place on the tracks over the New Haven Railroad's Hartford Station Viaduct.

now standardize on Wrought Iron tie spacer bars

Cost-conscious road operators are quick to see the advantages of wrought iron tie spacers. Already, sixteen major railroads make these bars standard practice. Many other lines are in the testing and development stages.

Here's why. Wrought iron tie spacers provide maximum durability in a service exposed to severe corrosive attack. They make installation of ties speedy, easy and accurate. Guard log fire hazards are eliminated from bridge decks. Trackmen and bridge crews have more uniform



Wrought iron tie spacers measure approximately $\frac{3}{8}$ " x 3" x 20'. Each bar weighs about 125 lbs. Holes can be punched in the shop, or drilled on the job site. Or, Byers will punch the holes to your specifications before delivery. Photo above at Vulcan Steel Company's warehouse shows part of 223 tons of bars ordered for New York City Transit Authority elevated railway system.

right-of-way for maintenance and inspection.

You'll find rugged wrought iron alive and kicking in a wide range of corrosive services, long after less durable materials have failed to survive. We'd like to talk with you about some of these successful applications.

Write our Engineering Service Department for specific information. Or, send for our new 32-page booklet, *Wrought Iron for Railroads*. A. M. Byers Company, Dept. RR, Clark Building, Pittsburgh 22, Pennsylvania.

BYERS Wrought Iron Tubular and Hot Rolled Products

Corrosion costs you more than Wrought Iron

More M/W Work for Less Money

More machines and better supervision enable the railroad to improve output of its track forces. The road is working toward a further gain of 15 per cent in efficiency in 1958. "Functional budget" is expected to give better control over M/W expenditures.

In a recent interview, Ben W. Heine-man, C&NW chairman, stated that the North Western has reduced its spending for track maintenance in 1957, although "we've laid more rail, installed more ties and applied more ballast than the road has done previously." This result has been achieved, he declared, because of "increased mechanization and better supervision, and we hope to improve efficiency by as much as 15 per cent again in 1958."

One of the first things that the new management of the North Western did, after assuming office on April 1, 1956, was to inaugurate new operating and maintenance techniques. To offset increasing wage costs, it was decided that a high degree of mechanization aimed at more efficient use of its labor forces was necessary. Although the plan is still in the development stage, it is already paying off in lower unit costs for maintenance work.

40-Hour Week and Mechanization

At the time the 40-hour week went into effect, the road had stepped up the efficiency of its track-maintenance forces by extending section limits and by introducing mechanized maintenance gangs in main-line territory. It had also stepped up the efficiency of its rail-laying and ballasting gangs through greater mechanization. Decision was also reached to place out-of-face surfacing on a cycle basis with the time interval varying, according to the amount of tonnage carried, from 5 to 10 years.

However, after taking a long, hard look at this organization, the road found that the supervisory potential of its section foremen was far from being realized with one or two men on each section. Furthermore, frequent pooling of section crews was required to accomplish many maintenance tasks and much time was being lost in traveling back and forth. It was reasoned that more work could be produced if the section limits in main-track territories were further extended and truck gangs, each comprised of a foreman and 6 to 8 men, established.

This new plan was put into effect in 1957 on the main line of the road's Galena and Iowa divisions, and it is planned to extend this arrangement to other divisions. A large number of trucks were purchased, along with other equipment, and the truck gangs were formed, so far as possible, from men already on the track payroll. Such gangs do spot lining and surfacing, and are utilized in connection with cycle maintenance, such as renewing ties.

Recently one of the truck gangs, equipped with the latest labor-saving machines, has been used on an experimental basis to give the track an out-of-face lift of about 1 in. The machines assigned to the gang for this purpose included a Nordberg Trak-Surfacers, two Jackson Track Maintainers, a Nordberg Trakliner, a Kershaw track broom and a Kershaw Ballast Regulator. With these machines and six or seven men, plus the foremen, it is hoped to get a minimum production of 4,000 ft of track per day.

"We are constantly studying our maintenance-of-way practices," stated B. R. Meyers, chief engineer, "with the view of mechanizing every type of work we can economically justify. We are also using materials of good quality to produce the most economical service life."

As an aid in planning the acquisition of new machinery the railroad carefully examines all cost aspects of the operations and purchases such machinery as it can justify on an economic basis.

Increasing Gang Output

In 1957, the North Western purchased 180 units of work equipment at a cost of approximately \$1 million. The equipment included ballast-working units, track-surfacing and lining equipment, heavy-duty grading equipment, tie-renewal machines, off-track rubber-tired cranes and other miscellaneous units, including 81 trucks. For 1958, it is considering a further expenditure of over \$1 million for work equipment, which is expected to produce an average saving of 35 per cent.

Supervision has been intensified. The road now has a process engineer and an assistant who augment the engineer of maintenance in constantly field checking the progress and organization of the track gangs. If the gangs are not working efficiently, they make immediate on-the-ground adjustments for increasing production. The output of these gangs is followed closely by all supervisory personnel from the chairman and president down, and the division engineering officers are spending all time possible in the field.

Keeping Tabs on Expenses

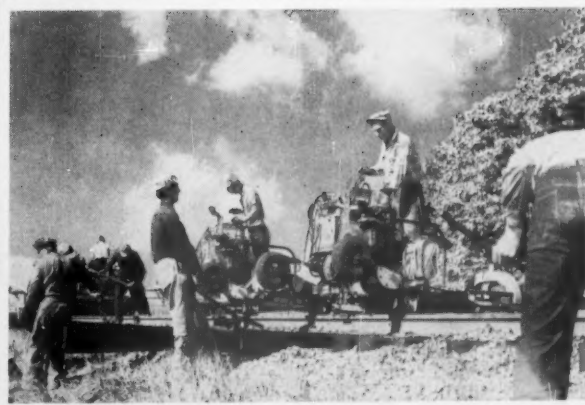
Expenditures are being watched more closely than ever before. To help achieve better control of costs a new control system is being set up for use in 1958. Called a "functional budget," it will show by months for the entire year how much money has been allotted for both labor and material for each responsibility area. Shortly after the end of each month every division engineer and roadmaster and other supervisors will receive a statement showing the exact amounts each has expended during the previous month by each account. The rapid compilation of this information is made possible by the road's new IBM accounting system.

The functional budget is made up in advance in such manner and detail as to be easy for the roadmasters and supervisors to control costs. It shows amounts allotted for engineering and supervision and all the various items of work for which the supervisors are responsible. AFE work is also shown on this statement but these items for labor and material chargeable to capital account are deducted from the totals to show the net amounts to which each roadmaster and supervisor must hold his costs that are applicable to maintenance.

It is believed that this new system will not only aid the roadmasters and other supervisors in governing their work and controlling costs, but will also focus attention on the high cost of materials, down to the smallest item.



1 KICKED OUT—Deteriorated ties are dislodged by a Fairmont Tie Remover, after spikes and plates have been removed by another unit.



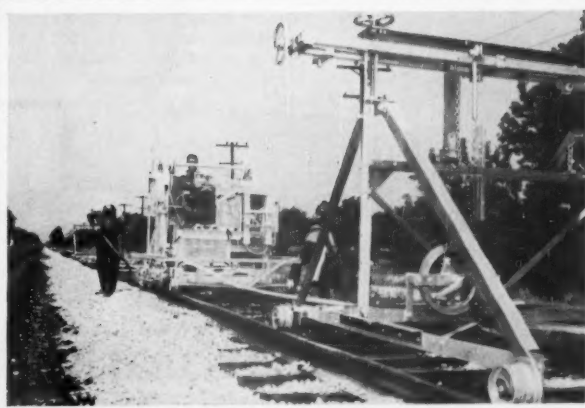
2 DOUBLE-TEAMED—New ties are inserted by two other Fairmont machines working together. Hydraulic units need just two men each for operation.

Example: Tie Renewals Are Mechanized for Speed

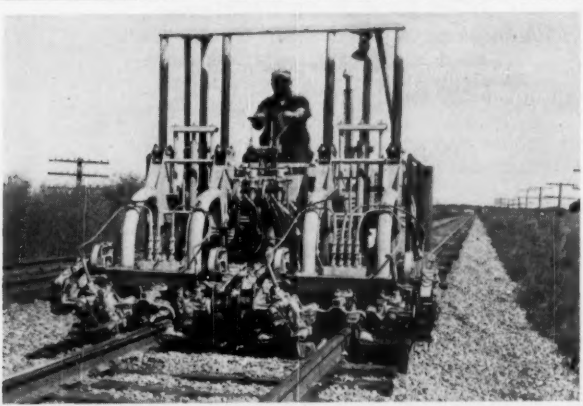
Time saved with modern work-equipment cuts costs in maintenance jobs like this.



3 NEW ADDITION—Fresh ballast is spread to permit subsequent track lift. It's distributed, then shaped, by Korshaw Ballast Regulator.



4 WIRED FOR SIGHT—Trak-Surfacar, coupled with Nordberg Tamping Power Jack, "sights" the track-raise with stretched wires before tamping.

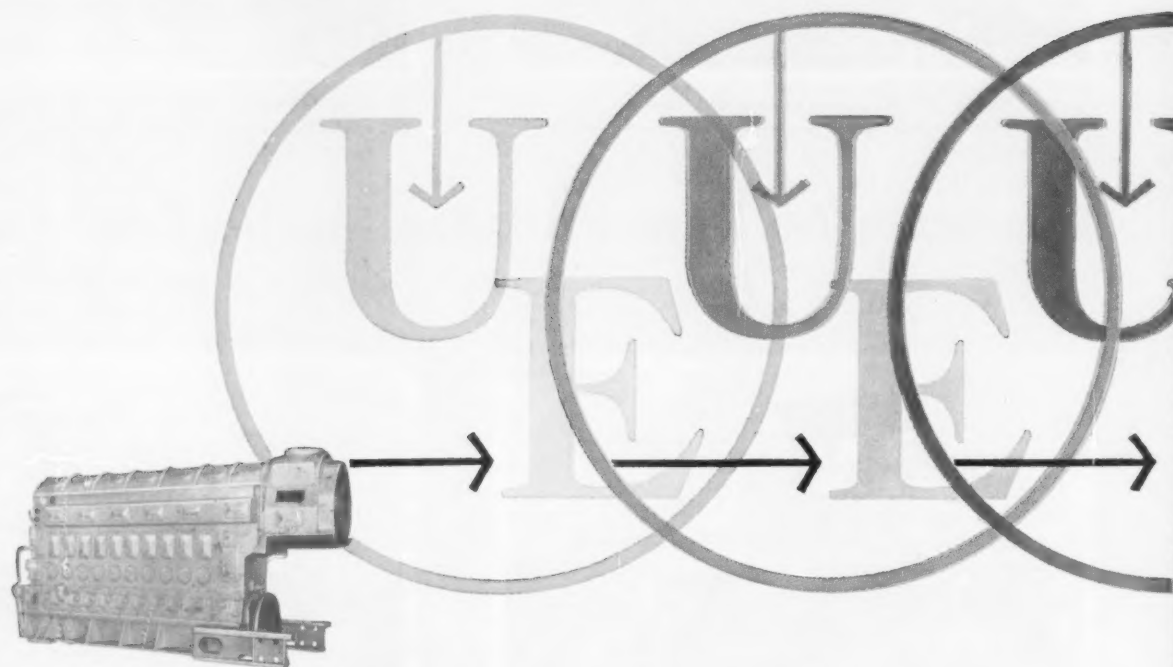


5 PRODUCTION JOB—Jackson Truck Maintainer speeds work of tamping out-of-face, provides uniform performance in tie-renewal project.



6 JUST A HAIR—With a scope used to direct Nordberg Trakliner operation, this step is done faster than a gang of men could do it.

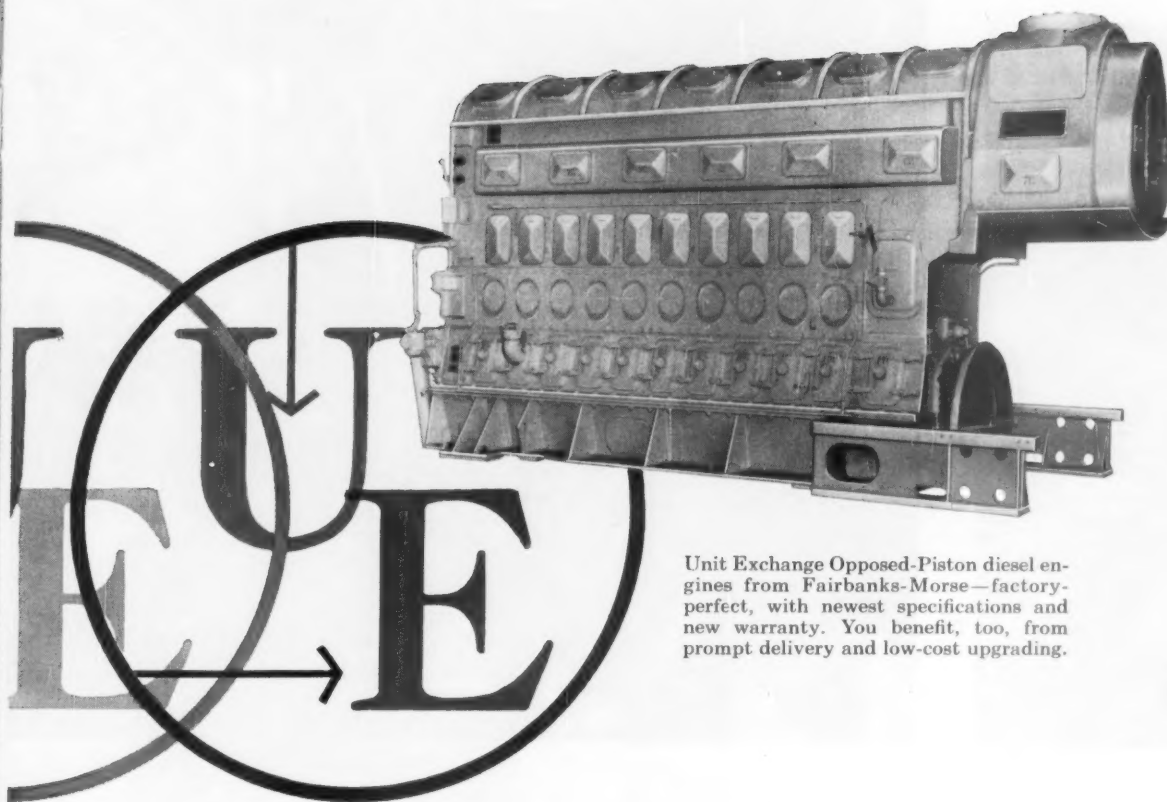
Factory-Perfect



Fairbanks-Morse Unit Exchange

Only in the Fairbanks-Morse plant do you find the facilities, skill and techniques to review, rebuild and revitalize F-M Opposed-Piston diesels to meet factory-perfect standards. Plant and on-the-road tests show that the only engine better than the O-P you now have is one *made better* by F-M craftsmen—backed by daily *experience with only one engine design*.

This means improved engine performance and dependability you expect—more often than not, *better than expected*.



Unit Exchange Opposed-Piston diesel engines from Fairbanks-Morse—factory-perfect, with newest specifications and new warranty. You benefit, too, from prompt delivery and low-cost upgrading.

**You also expect and get
these other F-M Exchange advantages:**

Prompt Delivery—O-P engines of most every rating and major accessory group are ready for prompt shipment, due to a 60% increase in F-M's Unit Exchange program.

Low-Cost Upgrading—The F-M Unit Exchange program reduces your costs all along the line—through lower maintenance, reduced shop facilities, lower parts inventory. At the same time you effectively meet increased tonnage demands made on your motive power fleet.

Newest Specifications—F-M's continual search for improved engine performance and longer life can substantially increase the efficiency of the O-P engine and its components. The exchange engine reflects the progress in F-M's newest specifications.

New Warranty—Each engine, blower, pump, injection system, generator and traction motor in the F-M Unit Exchange program is furnished under the standard new-equipment warranty.

Remember, the only engine better than the O-P you now have is an Opposed-Piston diesel made better by Fairbanks-Morse. It's available NOW through F-M Unit Exchange.

For full details and delivery schedules, write: Fairbanks, Morse & Co., Diesel Locomotive Service Department, Chicago 5, Illinois.



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DIESEL LOCOMOTIVES AND ENGINES • MOTOR CARS AND RAILROAD EQUIPMENT • ELECTRIC MOTORS • GENERATORS • PUMPS • SCALES • WATER SERVICE EQUIPMENT • HAND LAMPS

Q: OK, we've followed instructions so far. What's next?

A: Close your control and fuel pump circuit breakers.



How the Reading Saves Man-Hours

With radio, a road foreman of engines tells a distant engine crew how to start a stalled locomotive. Yardmasters, dispatchers (see right), trainmasters and other supervisors and employees are finding radio a time saving aid in their work.

As a railroad that averages one industrial siding for every mile of main line, the Reading is obtaining maximum benefit from radio communications. Of the 93 locomotives so far equipped, many are used in local freight service and industrial switching. For talking to crews on these engines during their switch runs, the Reading has spotted five base stations at strategic locations. Four are at junctions of several Reading lines; the fifth is at Bethlehem. Each station has approximately a 20-mile radius for talking, with road trains, local freights and yard engines.

At Reading, the yardmaster and the chief dispatcher have remote control

units enabling them to use the base station. Other stations are similarly equipped to obtain maximum usage of radio.

Auto Radio Gets Workout

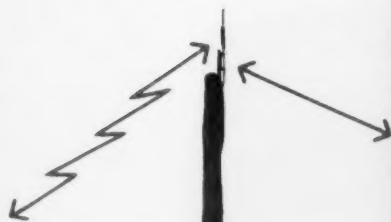
Eleven automobiles and two trucks have radio for use by trainmasters, yardmaster, superintendents, and road foremen of engines. One truck each, of the communications and the motive power departments, has radio.

The latter department is finding radio a tremendous time saver when enginemen radio the dispatcher that they have engine trouble. The dispatcher radios the road

foreman of engines, and he in turn calls the engineer via radio. They confer about the trouble, and then the road foreman may radio the motive power department truck, instructing the men to drive to the locomotive.

For the Future

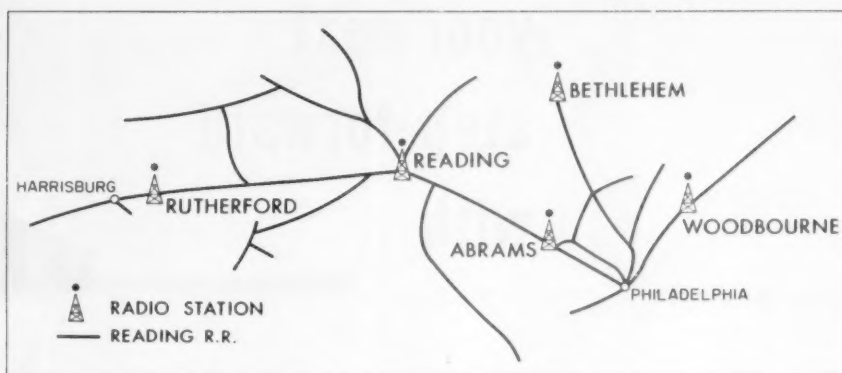
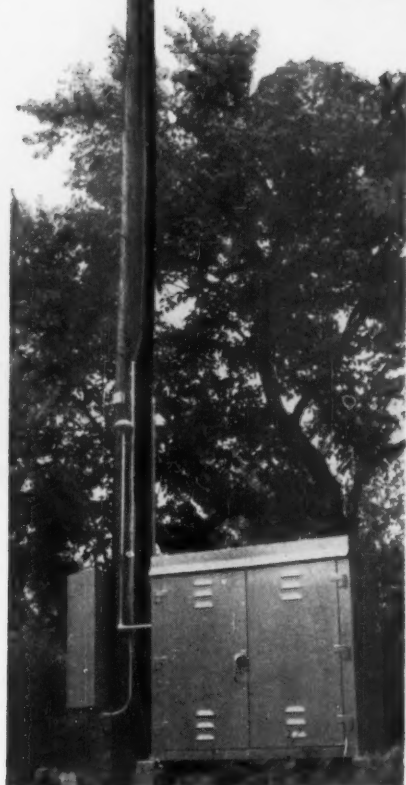
Prior to installation of radio, much time was lost making phone calls and waiting for either the road foreman or the motive power men to return to their offices if they were out. Often the road foreman is able to issue instructions from his automobile, via radio, to the engineer so minor



Q: "Has 62 showed yet? I've got room for him on No. 4 or No. 7 track."



A: "62 just left Leesport, so he should be calling you any minute now."



FIVE BASE RADIO STATIONS are at or near major yards and junctions of several lines of the Reading system. Exception is Bethlehem, an important interline junction.

'Intercom' gives quick call

At Reading, both the chief dispatcher and the yardmaster have remote control units for talking on the radio. Also included are "intercom" circuits which enable them to talk to each other directly. Such conversation does not "go out on the air," that is, actuate the base station radio transmitter. A direct call is initiated by the yardmaster, for example, by depressing his intercom switch, and speaking into his handset.

The dispatcher uses the intercom to inform the yardmaster about arriving trains, and conversely, the yardmaster informs the dispatcher about road trains ready to leave the yard. Other base stations have this intercom arrangement between two or more offices, as it saves time and does not tie up telephone lines for these calls.

The Reading base station is atop Mt. Penn, about a mile from the station. An intercom circuit connects the base station with the telegraph office, so the radio maintainer can check with the office and the chief dispatcher when he is up on the mountain testing the base station equipment.

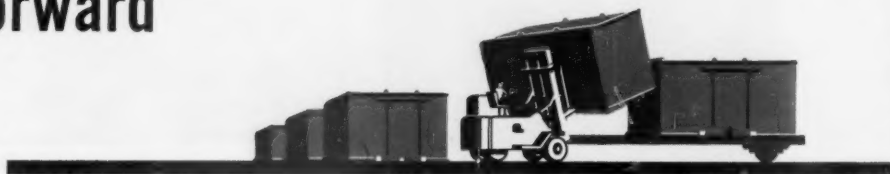
trouble can be cleared up right away.

Twenty more locomotives are to be radio-equipped soon, and after that will come road engines and cabooses with more base stations at other major yards.

All radio equipment repairs are centered at the radio maintenance shop in Reading. Here a visual tag system shows "at a glance" where every item of radio equipment is located—base station or mobile unit. Radio equipment is of the FE type, now furnished by Sperry Radio Service, and installed by communications department employees under the jurisdiction of G. B. Blatt, chief signal, electrical and communications engineer.

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Now America's railroads get new competitive power in freight transportation! New *Cargo Units* are loaded in plants...then shipped anywhere without reloading or handling the cargo! Lading is protected from damage or pilferage; transfer is fast, safe and simple from railroad cars to trucks, barges, or ocean freighters.

This is the **acf Adapto** Materials Handling System: Cargo Units that can be transferred, fully loaded, in just a few minutes. Short lengths, low centers of gravity, and specialized constructions of the Cargo Units minimize damage to lading in transit.

Integrated Shipping with **acf** equipment is in use today, bringing new profit and flexibility to railroad freight handling. Specialized Cargo Units available in-

clude box compartments, refrigerator compartments, gondolas, covered hoppers, and others.

Whether you use Cargo Units or standard highway trailers for Integrated Shipping, **acf** equipment speeds service and lowers costs. In addition to Cargo Units, **acf** supplies transfer and tie-down devices, the Retractable Hitch for trailer tie-down, highway hauling equipment for Cargo Units, special railroad-trailer cars, and other freight cars of all types.

*An **acf** Representative will be glad to discuss the advantages of the **acf** Adapto Materials Handling System with respect to your own operation. American Car and Foundry, Division of **acf** Industries, Inc., 30 Church Street, New York 8, New York.*

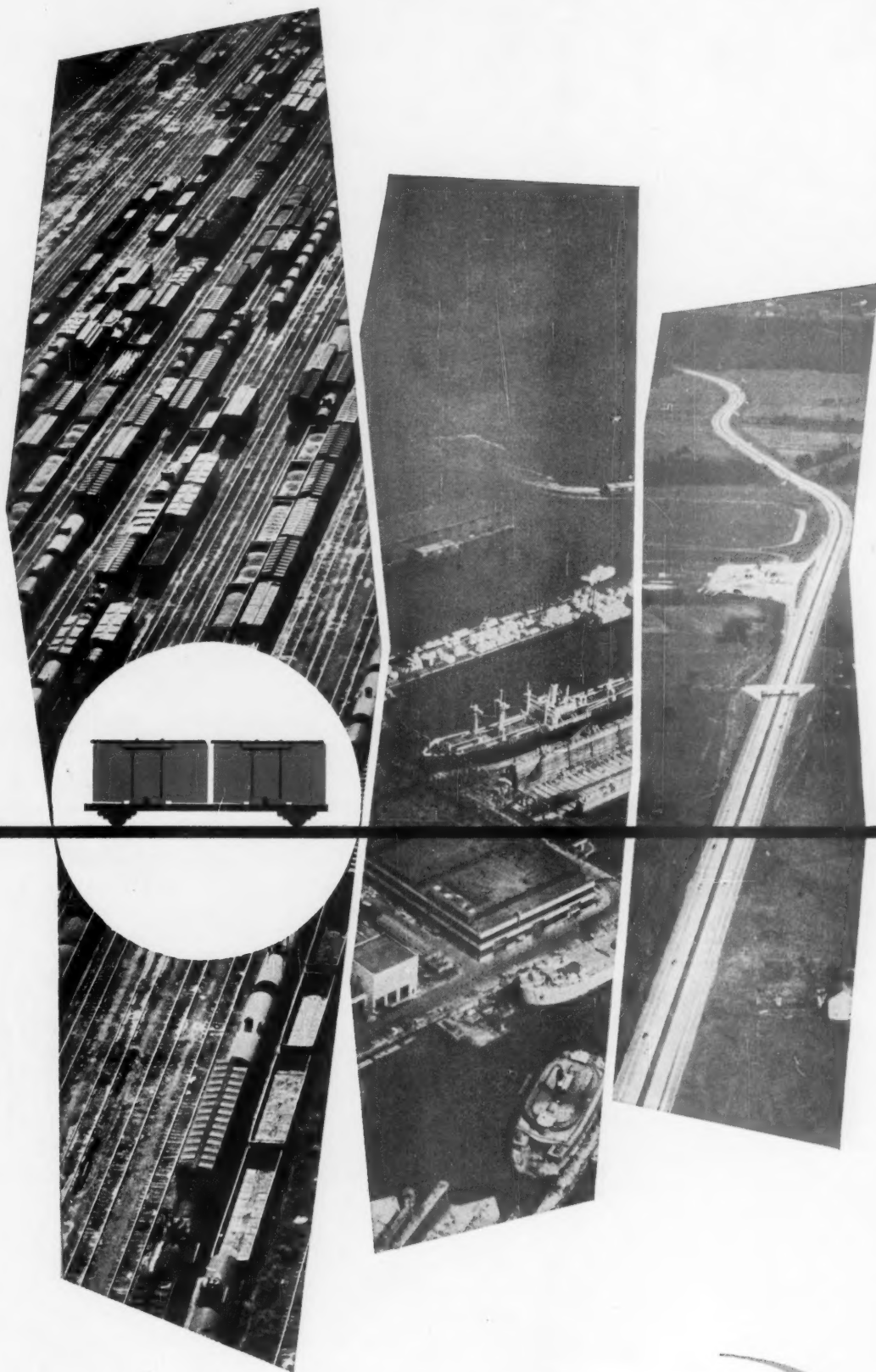


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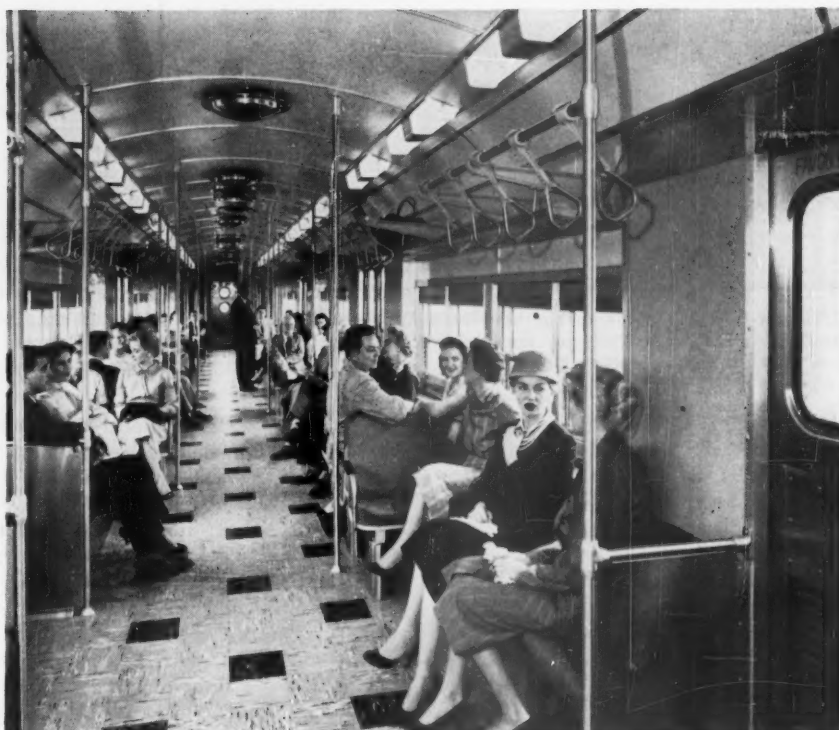
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Season's Greetings

FROM **INTERNATIONAL
STEEL COMPANY**
RAILWAY DIVISION
EVANSVILLE 7, IND.

Commuter boom on the Santos Jundiai, from 19 million passengers a year to 47 million in less than a decade, set the stage for . . .



New M-U Electric Cars in Brazil

HERE'S WHY: Brazil's busiest railroad, the 84-mile double-track Estrada de Ferro Santos A Jundiai of Sao Paulo, is currently receiving 90 new passenger cars from the Budd Company, Philadelphia, Pa. Designed primarily for suburban service, the new units include 30 motor cars, 30 trailers without control cabs and 30 trailers with control cabs.

Financed by an Export-Import Bank loan, this big investment in U.S.-built rolling stock is another step in a broad modernization program. The entire line is being electrified, with 52 miles of the project already completed.

The road is a heavy hauler of freight and has been holding its own in a sharp competitive battle with trucks moving over the new highway between Sao Paulo and Santos (see map). But the real point of stress on the EFSJ has been in the handling of passengers. The number of main-line passengers increased from 8 million in 1948 to 11 million in 1956; suburban passengers (commuters) increased from 19.5 million to 47.4 million during the same 8-year period.

This growth pattern has taken shape against an operating problem which is, to say the least, unusual.

About 11 miles from Santos, the roadway climbs 2,000 ft in six miles. Traffic moves up and down this sharp incline by means of steel cables and 1,000-hp steam engines, assisted by special locomotives attached to cuts of two to five cars. Cars climb the mountain over five successive inclined planes. Ascending cars are counterbalanced by descending cars through the cable.

Sixteen of the new Budd units are earmarked for this service.

Force behind moves to rehabilitate the EFSJ is Dr. Eng. Renato Feio, a man often characterized as the best-informed railroad officer in Brazil. He speaks of the need to make the railroad "a living economic unit" and figures that constant attention to service and the purchase of new equipment are things that can accomplish this result.

HERE'S HOW: The new passenger equipment will replace outmoded wooden cars. Each unit will seat 96 and provide for a maximum of 304 standees. Among other things, the new cars will make big annual savings in fuel, personnel and maintenance.

The lines on which the cars operate are electrified at 3,000 volts d-c. Trains consist of three-car units—one motor car and two trailers with a control position at each end. To provide for hauling two trailers, each motor car is powered by four General Electric 343-hp (continuous) motors, connected permanently, two in series. Gear ratios are 66 to 17. Auxiliary power for lights, fans controls, etc., is generated normally by a GE motor generator set consisting of a 3,000-volt motor and an 80-volt d-c generator, mounted on the motor car. The eight trailers without control cabs used on the escarpment are equipped with 7½-kw Waukesha propane engine generators, which supply auxiliary power when the cars are not in the electrified zone.

The cars, which are 85 ft long, have four sliding entrance doors on each side. They are of stainless steel construction, assembled by the Budd Shotweld process. They are built to AAR specifications.

(Continued on next page)



THROUGH TRAINS operating between Santos on the coast and Jundiai on the West are moved by diesel-electric, cable and straight-electric motive power.

THE RISE up the escarpment from the low coast country to the high country inland is 2,000 ft in six miles on a grade of 8 per cent.

(Continued from preceding page)

Weights of the cars without passengers are: motor car, 139,630 lb; trailer car with cab, 89,550 lb; trailer without cab, 88,150 lb. There are 94 seats in the motor car and the trailer with the control position, and 96 in the center-unit trailer.

Passenger side windows are Adams & Westlake two-section, having top fixed, bottom lift and continuous rack with spring catches except for double windows which have center mullions.

The overall interior treatment is intended for easy cleaning and maintenance. The car interiors have plastic faced linings, plastic tile covered floors, plastic

covered fabric seats, unpainted aluminum molding and trim, stainless steel flashings, doors, stanchions and hand grips.

Ventilation is by circulating and exhaust fans. Cars are equipped with public address system. Safety Industries fluorescent lighting is used in the coach sections with incandescent lighting for low ceiling areas.

Both motor cars and trailers have four-wheel, single-equalizer, single bolster, inside swing hanger General Steel Castings trucks, equipped with coil bolster springs and coil equalizer springs and clasp brakes. Couplers are the AAR Type H short shank, tightlock type, centered ver-

tically by steel springs. The double acting draft gear has six rubber mats for draft and five for buff.

The Westinghouse Air Brake Company's combined electropneumatic and automatic brake equipment is arranged for multiple-unit operation.

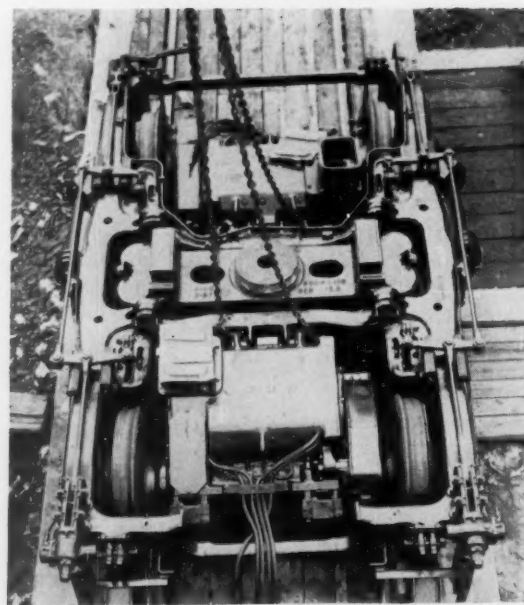
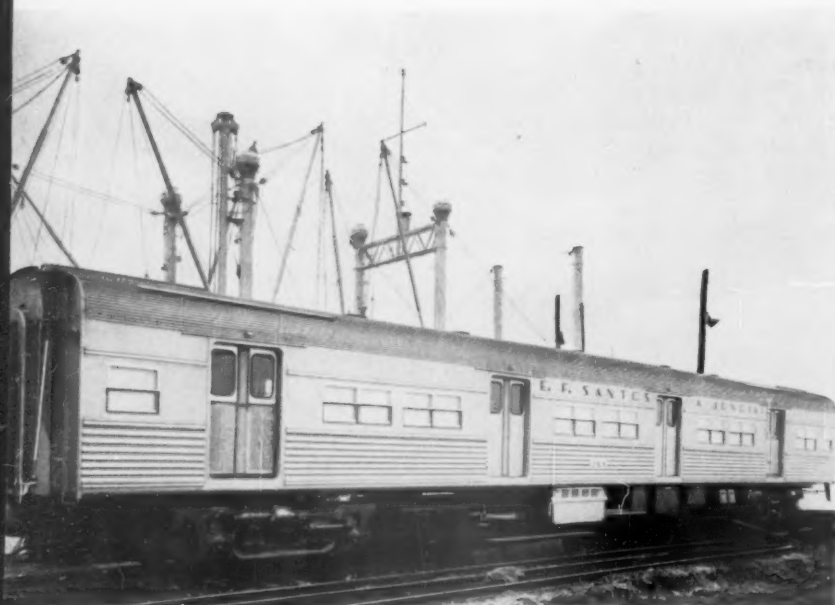
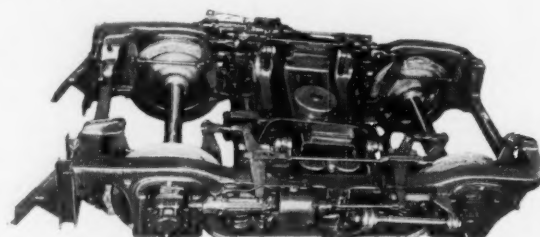
Handbrakes are Peacock lever-type, mounted on a collision post at one end of the car.

Wheels are 36-in., high carbon rolled steel with semi-cylindrical treads. Timken roller bearings are used on the motor cars and SKF roller bearings on the trailers. Motor car bearings are 6 by 11 in. and trailer car bearings 5½ by 10 in.

TRAILER TRUCKS (right) are equipped with coil bolster springs, coil equalizer springs and clasp brakes.

POWER TRUCKS on the motor cars (lower right) are each equipped with two 343-hp traction motors. Each motor car hauls two trailers.

ONE of the completed cars (below) ready for loading aboard ship.



Refrigerator Car Doors of Aluminum are EASILY OPERATED BY ONE MAN

Refrigerator car doors of Reynolds extruded aluminum have been built by Pacific Car and Foundry for North American Car Corporation. These companies find that refrigerator car doors of rugged, lightweight aluminum are an ideal way to save weight and cut operating costs.

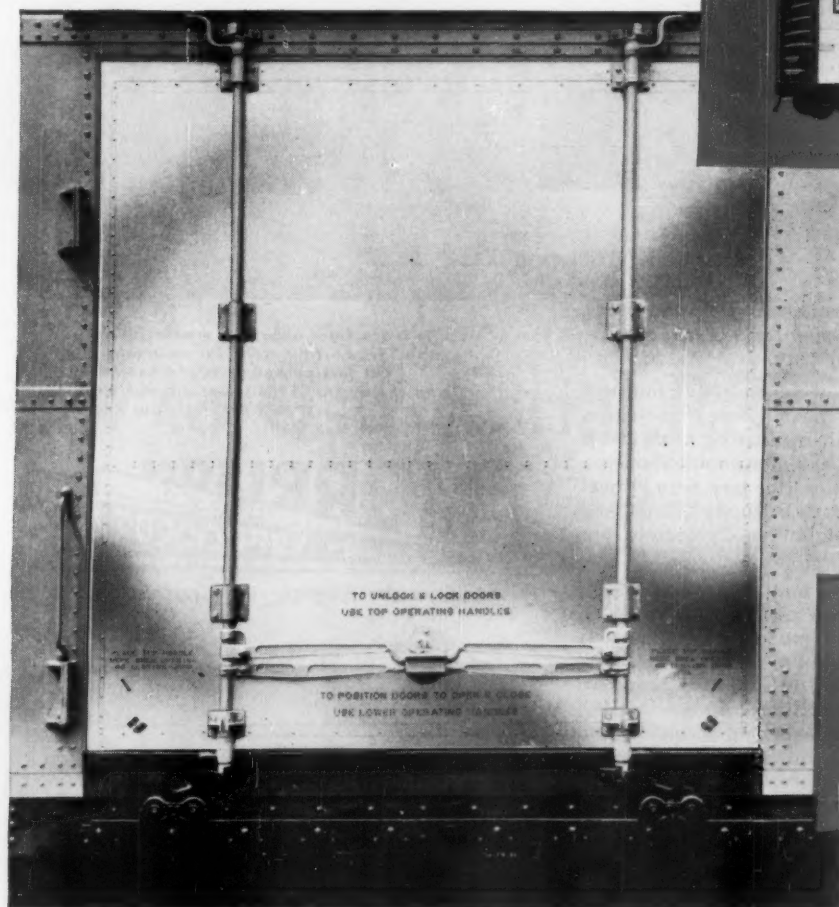
Total weight of the new aluminum door complete is only 740 lbs. compared with 1090 lbs. for steel doors. Light as they are, aluminum doors will take all the wear and tear of daily railroad service and still be easy to operate. *One man can open these doors easily*, without resorting to "crowbar" tactics.

Aluminum doors are virtually maintenance-free, do not need painting because aluminum is rustfree and corrosion-resistant.

Reynolds designers worked with Pacific Car and Foundry to develop these new doors and will be glad to work with you on your new applications for aluminum.

For details on important savings in baggage car doors, box car doors, loader beams, floors and floor racks, car roofs, crossbuck and operating signs, call your local Reynolds office, or write *Reynolds Metals Company, P. O. Box 1800-TM, Louisville 1, Kentucky.*

Watch Reynolds All-Family Television Program
"DISNEYLAND", ABC-TV.



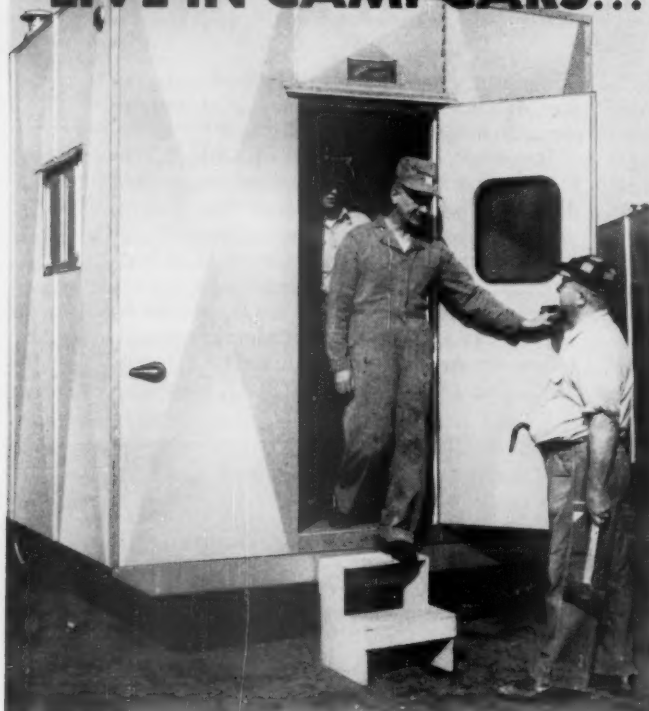
New aluminum
refrigerator car door
complete, weighs
only 740 lbs.,
compared to
1,090 lbs. for steel.



The Finest Products
Made with Aluminum

are made with
REYNOLDS ALUMINUM

WHEN THESE MEN LIVE IN CAMPCARS...



these men ride
the gravy train



The gravy-train is that wonderful train that rides the route to that Never-Never Land of low operating costs and high productivity.

It's an Ever-Ever Land to those railroads that use Morrison CAMPCARS to move, house and sustain their M/W Crews. Their operating costs drop immediately for CAMPCARS offer mobile housing that cuts down portal-to-portal pay time, travel time, food and lodging costs. Actually CAMPCARS can house 8 men for what you presently are paying to house one!

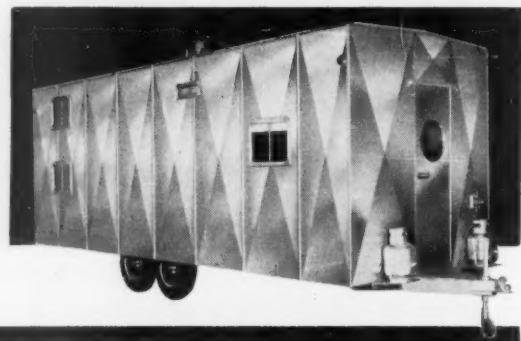
Morrison CAMPCARS are built by railroad men! The 30 year experience of Morrison-men in supplying railroads with important equipment is reflected in the quality, built-to-take-it construction of CAMPCARS and their unique and practical design. They afford commodious off-track housing that builds crew morale, working incentive and higher productivity. They are clean, sanitary and completely equipped to enable 2 to 50 men or more to live and work at remote spots independent of utilities or service for a week to ten days.

To learn more about this wonderful ride on the gravy-train, write for your copy of our fact-packed CAMPCAR brochure and the names of the important railroads that presently use them.

MORRISON

RAILWAY SUPPLY CORP.

1437 BAILEY AVENUE • BUFFALO 12, N. Y.





TWO NEW PLANTS are planned for this industrial area in suburban Chicago—Kitchens of Sara Lee at one end; Regensteiner Corp., magazine publishers at other end.

PLOTTING ROUTE for aerial pictures are pilot R. G. McCoy and Milwaukee Assistant Industrial Commissioner E. J. Stoll. Flight added 450 photos to files.



How to Use Aerial RR Photos

The Milwaukee has made 450 Pictures of its lines. It started as an industrial development project—but by-products are already growing from this aerial survey.

In the top drawer of a steel cabinet on the second floor of Chicago Union Station, the Milwaukee has a new file—450 8-by-10 photographs with negatives and a like number of 35-mm color slides.

Compiling the "file" cost in the neighborhood of \$4,000—a comparatively small price to pay for the benefits which the company's industrial development department feels will grow out of the material.

The file consists of aerial photos of the Milwaukee from Terre Haute, Ind., to Aberdeen, S.D.; the two lines through Iowa; and a pair of branch lines in South Dakota and Minnesota. Assistant Indus-

trial Commissioner E. J. Stoll and photographer-pilot Robert G. McCoy started the project last June, with an eye toward snapping about 200 pictures which would then be used to acquaint industrial prospects with available sites along the rail lines. The original plan grew—both in size and scope—and the road wound up the survey with its 450-photo file and about a half-dozen by-product applications for the pictures.

Some of the uses to which the photos may be put, above and beyond normal industrial development work:

- Assistance to rail customers in selling available property or buildings.

- Application in negotiations with governmental agencies on such matters as highway construction.

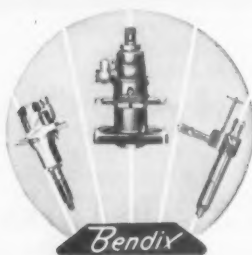
- Use as a new perspective on studies of various maintenance problems.

- Use as an "aerial inventory," especially in terminal areas with a view toward possible changes in track layout and conversion of operating areas to industrial uses.

- Value as a means for Milwaukee "ID" personnel to become familiar—quickly—with local situations in talking with representatives of local on-line communities.

(Continued on page 38)

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ORGANIZATION
FOR
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Sacramento, Langner & Rifkin, 1116-15th Street
San Francisco, McKinley Corp., 2196 Palou Ave.
Wilmington, Diesel Control Corporation, 226 North Marine Ave.

COLORADO
Denver 3, Central Supply Co., 1171 Lincoln Street

FLORIDA
Jacksonville 1, Spencer Electric Co., Inc., 40 West Beaver Street
Miami 36, Florida Diesel Service Co., 1930 North Miami Ave.

GEORGIA
Atlanta 3, Auto Electric & Magneto Co., 477 Spring Street, N.W.

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Chicago 16, Illinois Auto Electric Co., 2011-37 Indiana Avenue

INDIANA
Indianapolis 4, Gulling Auto Electric, Inc., 450 North Capitol Ave.

KENTUCKY
Louisville 4, Ellingsworth Auto Electric Co., 1003 East Broadway

LOUISIANA
Bossier City, Vaughan Tractor & Auto Parts Co., 605 West Street
Mail Address: P.O. Box 661, Shreveport, La.
New Orleans 13, John M. Walton, Inc., 1050 Carondelet St.

MARYLAND
Baltimore 1, Parks & Hull Automotive Corp., 1033 Cathedral St.

MASSACHUSETTS
Newton Upper Falls, W. J. Connell Co., 210 Needham Street, Newton Industrial Center

MICHIGAN
Detroit 2, Knorr-Maynard, Inc., 5743 Woodward Ave.

MINNESOTA
Minneapolis 6, Diesel Service Co., 2509 East Lake St.

MISSOURI
Kansas City 8, Electrical & Magneto Service, Inc., 2538 Grand Avenue
St. Louis 23, Diesel Fuel Injection Service Co., 9331 South Broadway

NEBRASKA
Omaha 2, Carl A. Anderson, Inc., 16th & Jones St.

NEW JERSEY
Newark 2, Tire Trading Co., 239 Halsey Street

NEW YORK
Brooklyn 32, A & D Diesel Service, Inc., 145 21st Street
Brooklyn 38, E. A. Wildermuth, Inc., 1102 Atlantic Avenue
Buffalo 9, Heltrich Electric Service, 1032 Ellicott St.
Troy, Ehrlich Electric Service, Inc., 200 Fourth St.

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Cleveland 14, Cleveland Ignition Co., 1301 Superior Ave., N.E.

OKLAHOMA
Tulsa 3, Magneto Ignition Co., 701 West Fifth St.

OREGON
Portland 14, Automotive Products, Inc., 1700 Southeast Grand Avenue

PENNSYLVANIA
Hazleton, Penn Diesel Service Co., No. Church at 27th St.
Philadelphia 32, J. W. Parkin, Jr., 2251 N. Broad Street
Pittsburgh 6, Automotive Ignition, 6358 Penn Avenue

TENNESSEE
Memphis 4, Automotive Electric Service Co., 982 Linden Avenue

TEXAS
Dallas, Beard & Stone Electric Company, 3909 Live Oak St.
El Paso, Reynolds Battery & Magneto, 801 Myrtle Avenue
Houston 1, Beard & Stone Electric Company, Milam at Palk St.
Houston 11, Magneto & Diesel Injector Service, 6931 Navigation Blvd.
Odessa, Electric Service & Supply, 1601 N. Grant St.
San Antonio 3, Womack Bros., 123 West Carolina

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Richmond 20, Charles H. Woodward Electric Company, 709 West Broad St.

WASHINGTON
Seattle 1, Seattle Injector Co., 2706 Second Ave.

WISCONSIN
Milwaukee, Fuel Injection & Electric, Inc., 934 N. Jackson St.

Canada
ALBERTA
Calgary, Hutton's Ltd., 131-11th Ave., West

BRITISH COLUMBIA
Vancouver, Fred Holmes Fuel Injector Sales & Service, Ltd., 627 Bidwell Street

NEW BRUNSWICK
Fredericton, Stairs Brother, 493 Northumberland Street

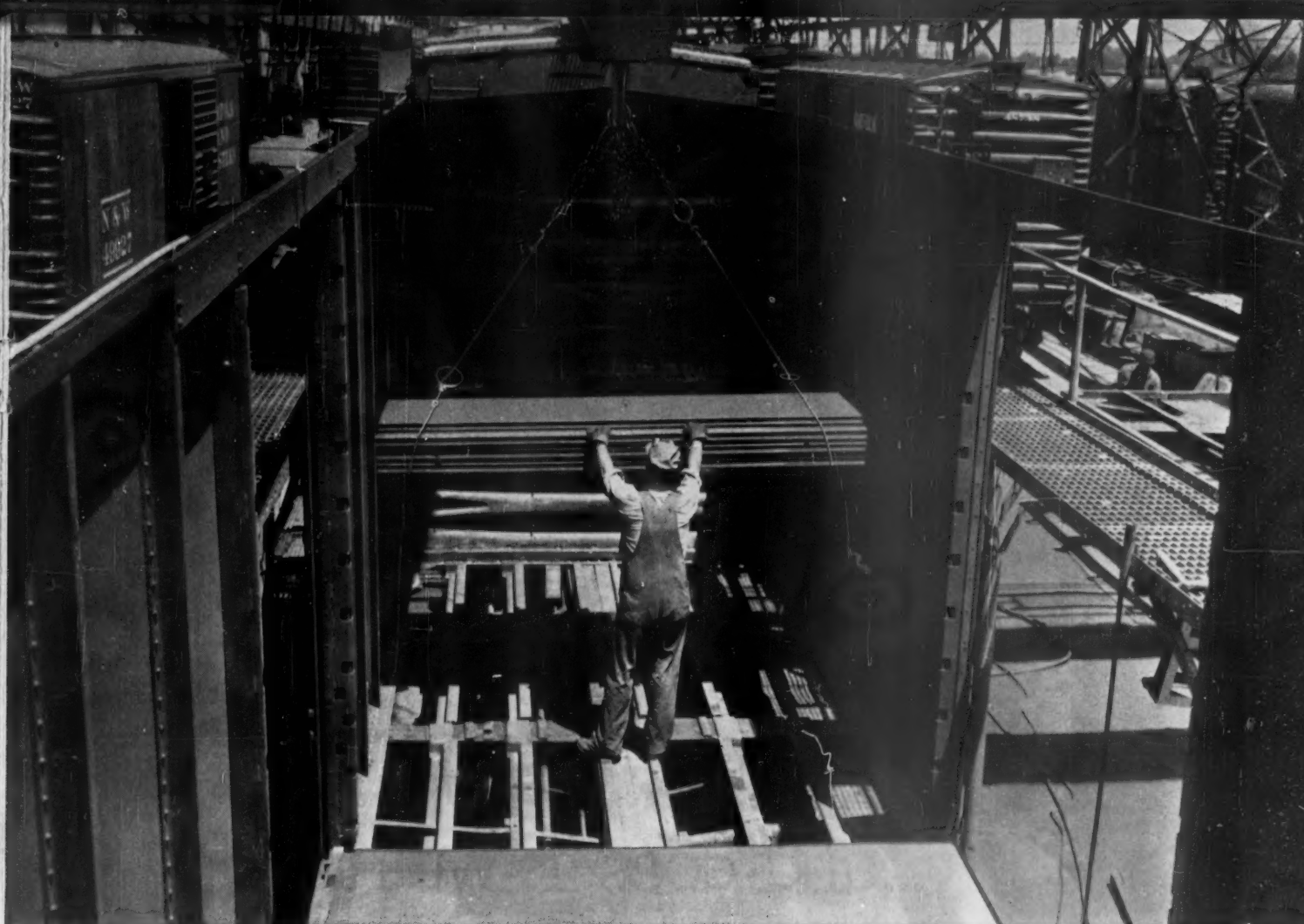
NEWFOUNDLAND
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For complete performance and cost studies on the use of N-S-F in heavy repaired cars, contact our nearest representative in Chicago, New York, Philadelphia, St. Louis, Cleveland, San Francisco, Minneapolis, Atlanta. In Canada, N-S-F is made and sold by International Equipment Co., Ltd., Montreal.

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Friction Draft Gear
Type NY-11-F
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Friction does it ...and does it well!

Effectively... the Westinghouse Friction Draft Gear puts friction to work. For the *smooth start* of a freight train, there is a soft initial action. Then when the **BIG** impact comes, the Westinghouse Gear is ready instantly with its **HIGH** shock-absorbing capacity. The initial action blends smoothly into a high ultimate frictional resistance.

In other words, the shock is absorbed by friction before it reaches the car and lading. Thereby, Westinghouse Friction Draft Gear cuts lading damage to a minimum; constantly stands guard against unnecessary rolling stock maintenance costs. Continuing research and development *keep* the Westinghouse Gear practical and economical...as well as effective!



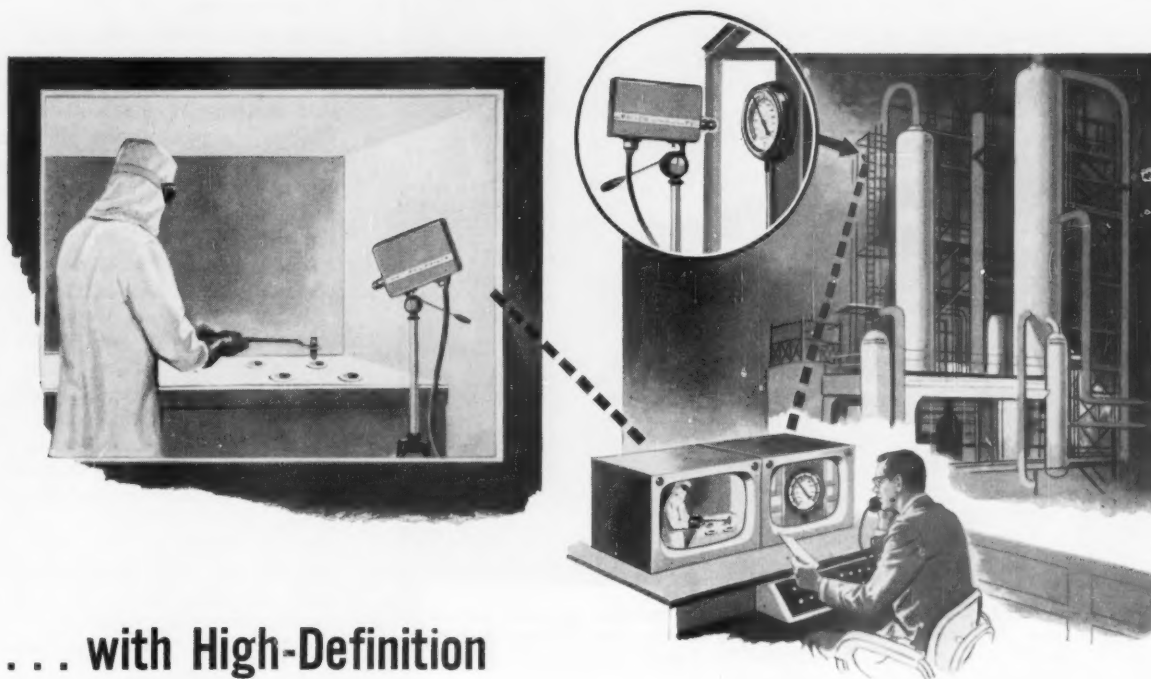
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See where *you* can't be—Now you can maintain constant watch on as many different critical locations as necessary . . . inconvenient gauges and operations, hazards . . . all from one convenient, central control point.

Philco's picture brilliance and accuracy of detail are unsurpassed. Details are sharp and clear. You can actually read gauges and dials at light levels as low as 10 foot candles.

Philco's complete line of ITV accessories extends the use of your basic system and permits maximum flexibility. Remote pan and tilt . . . remote iris and focus . . . Auto-Zoom lenses . . . lens turrets . . . weatherproof housings . . . explosion resistant housings . . . all assure complete versatility and adaptability to any installation through Philco's "building block" techniques.

Your Philco ITV installation gives guaranteed per-

formance because it is a *systems designed* installation . . . "custom-made" by our highly skilled systems engineering group to suit your specific requirements. And, Philco Industrial TV requires very little power . . . total power consumption for an entire system is actually lower than that required to operate a household iron.

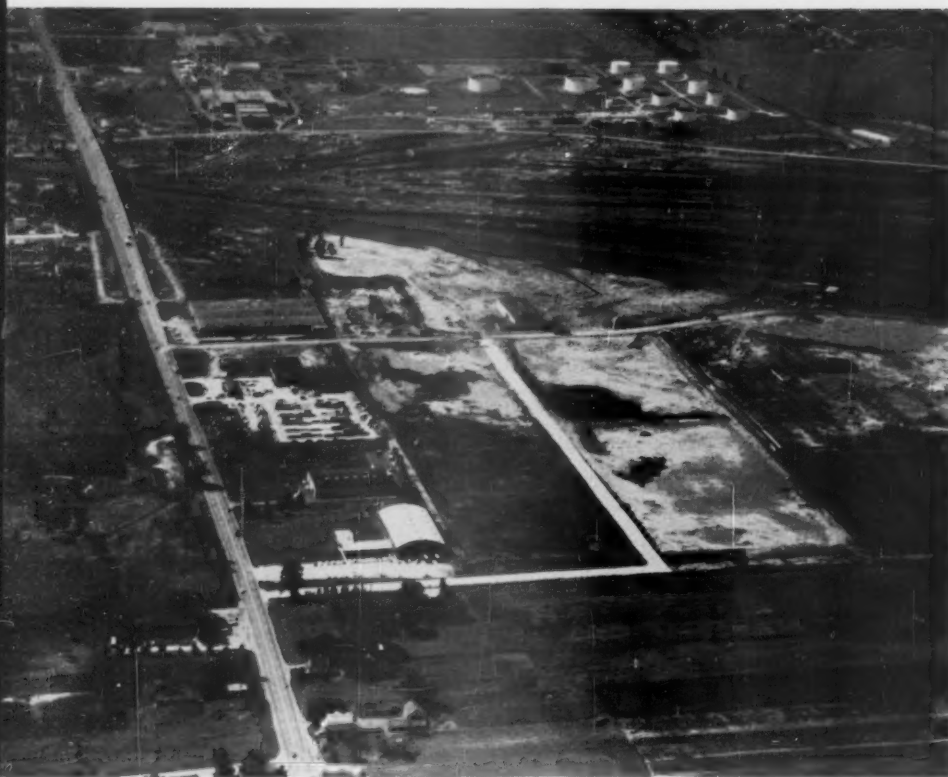
For economical and efficient remote visual control . . . specify Philco ITV.

Send for illustrated brochure, describing complete Philco ITV equipment and systems.

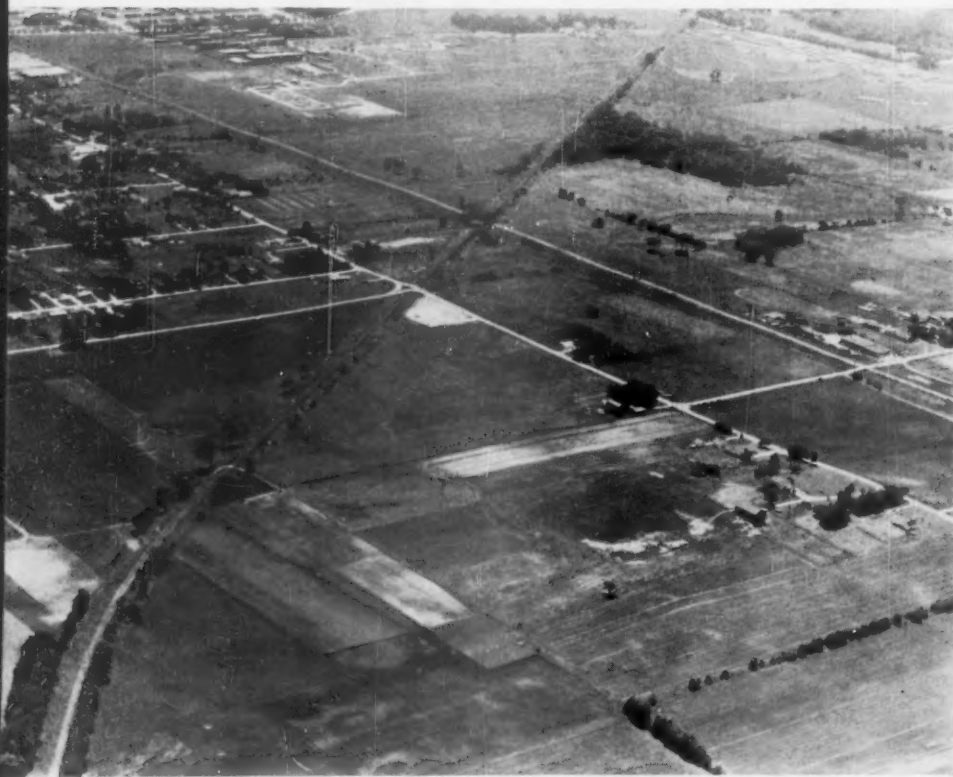
At Philco, opportunities are unlimited in electronic and mechanical research and engineering.



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150 ACRES adjoining Milwaukee's Bensenville yard are included in a new industrial development district at Franklin Park, Ill. Several lumber and plywood companies, Carnation Co., Central Grocers, Dakota Chief Sales Co. and National Produce Co., are included in the development.



VACANT LAND in this photo at Granville, Wis., (near Milwaukee) is owned mainly by the Milwaukee Land Company. Plans call for development of the acreage as a new industrial district.

(Continued from page 33)

Already, these ID photos have been requested in connection with dock work at Goose Island, Chicago; negotiations with the state of Iowa on a highway project at Sioux City; and an ICC hearing on installation of grain inspection facilities at Aberdeen, S.D.

As for "normal" industrial development uses—Mr. Stoll pointed to the first picture taken, showing railroad and private property on the northwest side of Chicago. In about a week after the photo was made available, he said, some six interests asked for copies with reference to possible industrial development of the property.

The Milwaukee plans to keep master copies of the photos in Chicago, along with probably three large indexed display volumes holding all the pictures for ID use. Other sets will be made up and placed at strategic cities along the eastern lines—Milwaukee, Minneapolis, Savannah, and Sioux City, for example. In addition, prints will be made available for any railroad department finding use for the aerial shots.

To supplement the photo file, the Milwaukee's ID department is also compiling a vast file of information on its on-line towns, through local agents.

Pointing out that the road needs local data to capitalize on the aerial survey, Industrial Commissioner S. J. Cooley asked agents for a map of their community and adjacent area; a copy of the town's comprehensive plan, zoning and building ordinances and zoning map; economic studies or surveys made of the area; descriptions of available or potential industrial sites; and a list of industrial development promotional publications. In addition, he requested names of the mayor, city engineer or engineer consultant, planning and/or zoning commission chairman and executive director of the Chamber of Commerce or local ID corporation.

Most of the photos in the file were taken from an altitude of 1,000 to 1,200 feet, with certain exceptions where the photographer went higher to tie in several specific areas in a panorama or dropped down to develop more detail on a smaller location. The black and white photographs were taken with Keystone aerial cameras with 10-inch and 15-inch focal length lens; the color slides with a Contax 35-mm camera.

By and large the job has been completed although certain areas remain to be "mopped up" in later flights. Thus far, it appears that similar surveys of the western lines may not be required, since a large part of the western territory—notably in Montana, Idaho and Washington—has been thoroughly surveyed for mapping purposes by organizations like the U. S. Forest Service.

"Safety"

POWER and CONTROL SYSTEMS

...Unequalled Performance...Low Cost Maintenance

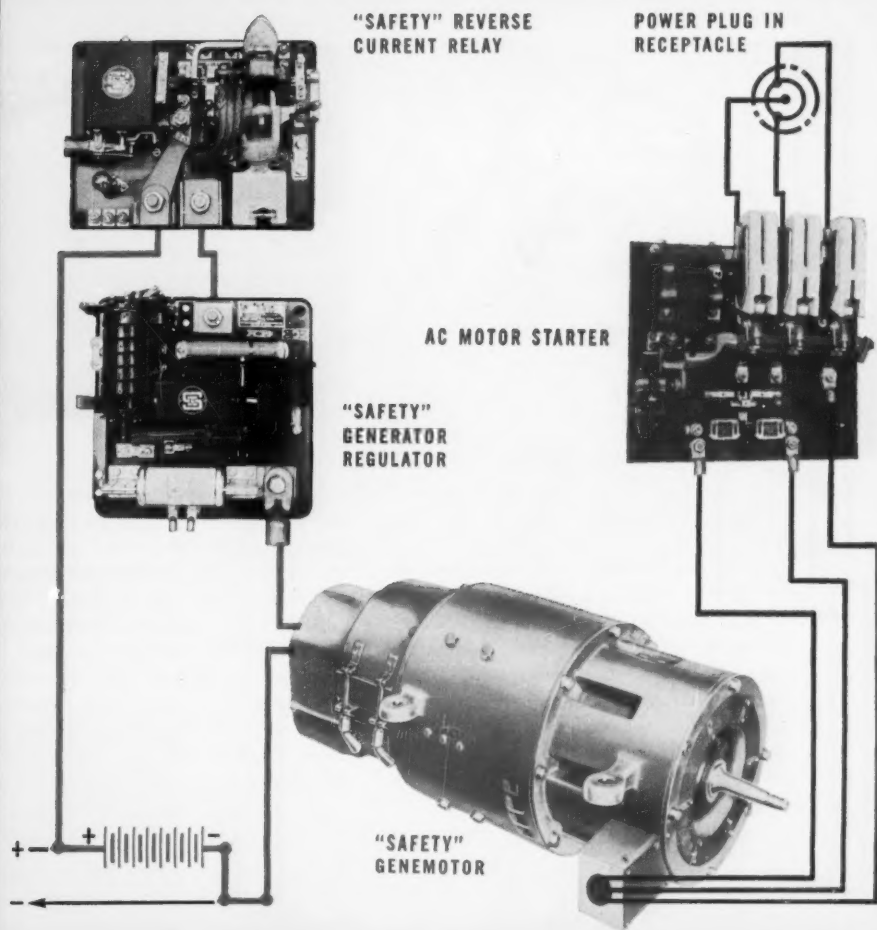
"SAFETY" GENEMOTORS...

are unsurpassed power plants for modern passenger cars

Designed and precision manufactured for long life with low cost maintenance . . . "Safety" Genemotors include . . .

- liberal use of armature copper and low loss iron to keep electrical losses . . . therefore heating . . . at a minimum
- armatures insulated with Class B material and mounted on shafts of the best alloy steel procurable
- dc armature, ac rotor and cooling fan easily removable as independent units
- all parts dynamically balanced individually before assembly on the shaft . . . assuring full interchangeability
- an automatic polarity reversing switch . . . eliminating maintenance of an additional generator necessary when an exciter is used

"Safety" Genemotors are available in capacities of 25, 30 and 35 kw and in 48, 80 and 140 volts nominal ratings, with 20 or 32 HP AC, 60 cycle, 220 volt motors . . . 12 to 20 kw output on standby.



"SAFETY" CONTROL EQUIPMENT...

- provides constant voltage regulation and positive current limit for maximum Genemotor protection
- lengthens battery life
- is compact and automatic
- requires minimum locker space
- is simple in design . . . requiring little maintenance . . . thereby reducing labor costs

"SAFETY" GENEMOTORS and CONTROL EQUIPMENT PROVIDE...

- constant voltage power for all air conditioning electrical equipment and lighting
- full output at very low train speeds . . . assuring quick power availability for re-charging low batteries while cars are enroute
- standby power in excess of requirements for pre-cooling cars and battery charging

Over 5,000 "Safety" Genemotor and Control Equipment applications on railroads throughout the United States, Canada and Mexico are actual proof of unparalleled performance in service.



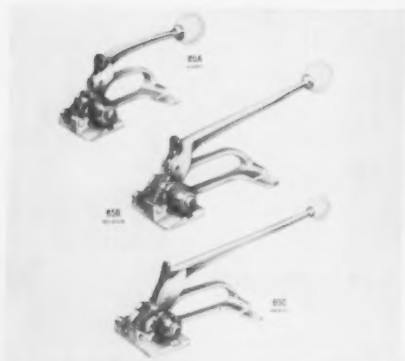
SAFETY INDUSTRIES, INC.

FORMERLY THE SAFETY CAR HEATING & LIGHTING COMPANY, INC.

NEW YORK • CHICAGO • PHILADELPHIA • RICHMOND • ST. LOUIS • SAN FRANCISCO • NEW HAVEN • MONTREAL

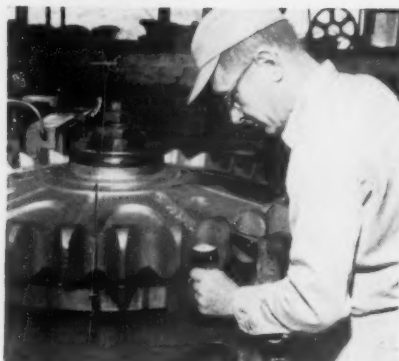
"SAFETY" PRODUCTS INCLUDE: Air-conditioning Equipment • Genemotors • Generators • Fans • Regulators • Blower Units
Lighting Fixtures • Switchboards • Luggage Racks • Motor Alternators • Dynamotors • Motor Generators • Dual Voltage MG Sets

New Products Report



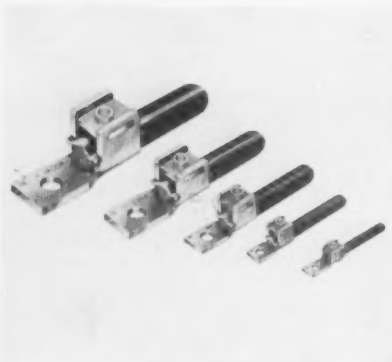
New Strapping Tool

Acme Steel's new steel strapping tool, the B5 Stretcher, is available in light, medium or heavy duty models engineered strap size from $\frac{1}{4}$ in. by .010 in. to $\frac{3}{4}$ in. by .035 in. Precision balanced it can be applied from any direction in any position. A rotary gripping dog gives continuous take-up, making the unit especially effective for strapping compressible material according to the manufacturer. Handles can be positioned quickly for maximum leverage. *Acme Steel Company, Dept. RA, 135th & Perry ave., Chicago 27 •*



'Boralloy' Sprockets

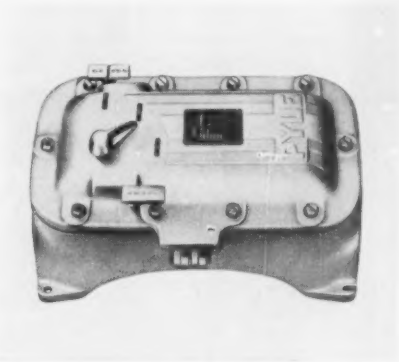
Crawler tractor sprockets of boron-bearing cast carbon steel are now available as standard equipment on Caterpillar's D8 and D9 tractors and replacement rims may be obtained for D8 sprockets. The new steel 'Boralloy' represents the first commercially successful attempt to produce boron-bearing cast carbon steel. Boralloy was developed as a cooperative research program involving Caterpillar and Harrison Steel Castings Co. *Caterpillar Tractor Company, Dept. RA, Peoria, Ill. •*



Pressure Type Cable Lugs

Socket type set screws feature a line of 55- to 515-amp "wide-range" pressure lugs for electrical installations. The cadmium plated lugs are designed for use in entrance switches, service troughs, panel boards, shallow housings and confined areas where projections present an installation problem.

Tightening socket, guide pad and contact pad are made of case-hardened steel to assure lock-tight pressures. *National Electric Products Corporation, Dept. RA, Pittsburgh, Pa. •*



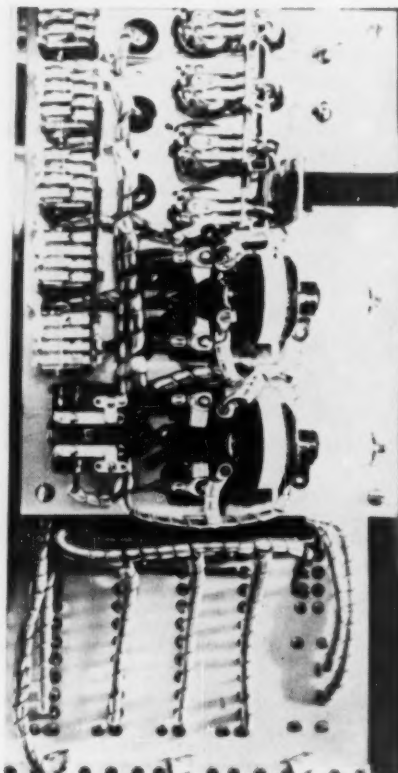
Motor Starter Enclosure

The most recent addition to the line of Pylets is a series of explosion-proof, dust-tight and weather-resistant (rain-tight) magnetic, across-the-line motor starter devices. The enclosures are available for $1\frac{1}{2}$ to 10 hp.

Extremely close vertical and horizontal mounting centers may be used. Front cover is hinged. Ferrous alloy housing and cover are cadmium plated throughout, including the cover joint surfaces. *Pyle-National Co., Dept. RA, 1334 N. Kostner ave., Chicago 51 •*

Heat-Retardant Paint

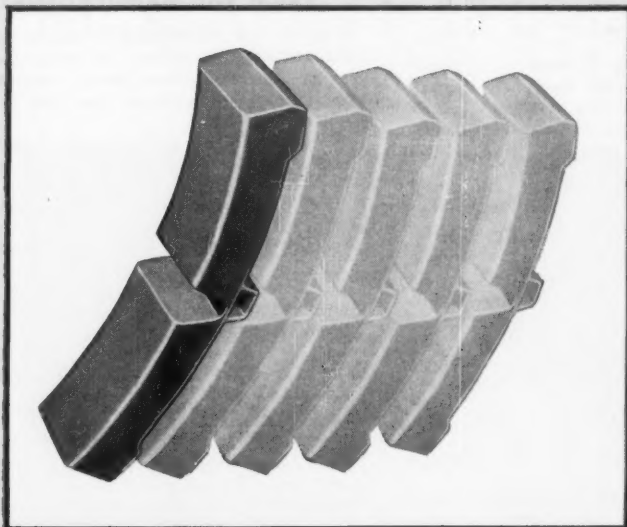
ALBI 107 is a new exterior heat-retardant paint which, according to a spokesman may reduce costs of industrial construction substantially through protecting tensile strength of load-bearing steel exposed to heat. The product also is reported useful as a corrosion inhibitor, as well as a heat retardant. It may be used on combustible surfaces, as well as on materials such as steel or aluminum. *Albi Manufacturing Company, Dept. RA, 98 East Main st., Rockville, Conn. •*



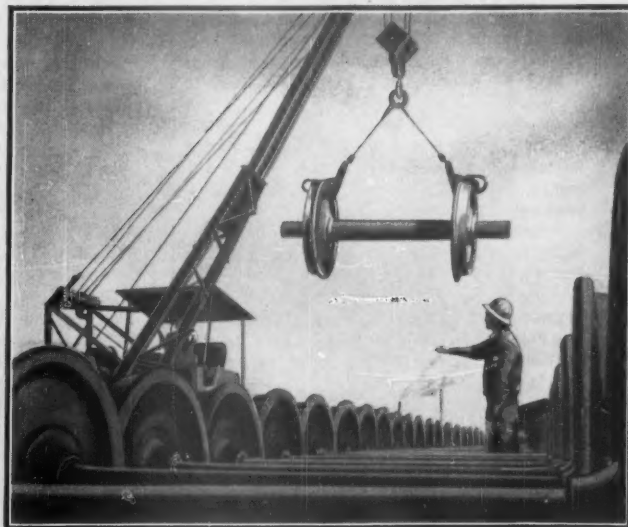
Plastic Cable Wrapping

Amp-Spirap is a spirally cut plastic wrapping that eliminates tedious cable lacing, insulation damage, and pulling of wires through spaghetti tubing. Quickly applied to wire bundles up to a $3\frac{1}{2}$ in diameter; permits individual wires to be entered or let out at any point. It may be unwound to allow wires to be added, removed or relocated eliminating the necessity for cutting cable bundle after assembly. It holds wires tightly, permits flexibility, provides mechanical protection. *Amp Inc., Dept. RA, Harrisburg 19, Pa. •*

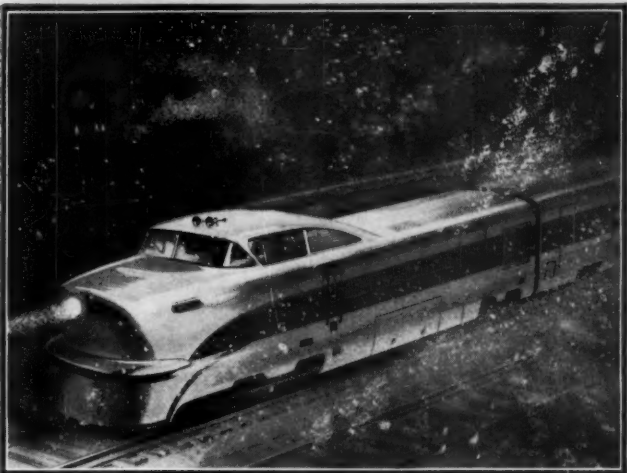
COBRA SHOES offer 4 Major Advantages



4 TO 5 TIMES THE SHOE LIFE—Millions of actual car-miles show that Cobra Shoes last four to five times as long as cast-iron shoes under matched conditions.

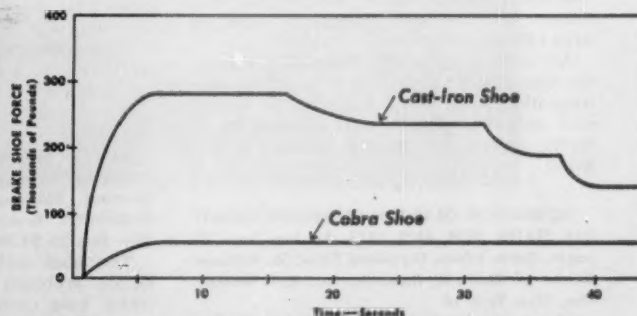


50 TO 100% LONGER WHEEL LIFE BETWEEN TURNS—With braking performance matched, wheel life between turnings has consistently averaged 50 to 100% more in favor of the Cobra Shoe.



ALL-WEATHER PERFORMANCE—Wet or dry—hot or cold—Cobra Shoes meet existing standards for stopping distances. Proved in actual railroad service.

Registered U. S. Trademark—Composition Brake Shoe



60-80% LESS BRAKING FORCE—Comprehensive single car break-away test shows the higher Cobra Shoe friction requires 60-80% less braking force than cast-iron shoes for equivalent retardation. Lower braking forces permit simplification and weight reduction of brake rigging and related components.

**Result: Savings up to
\$1400 per passenger car
per year.**

The COBRA SHOE — product of the combined research facilities of

Westinghouse Air Brake Company
Specialists in Braking

Johns-Manville
Specialists in Friction Materials

Current Publications

PERIODICAL ARTICLES

MORSE KEYED TO THE TIMES, by Donald J. Sorensen. *Railway Progress*, November 1957, pp. 40-43. Federation for Railway Progress, 1430 K st., N.W., Washington, D.C. Single copies, 35c.

With all the advances in railroad communications there is still need for railroad telegraphers, and the Railroad Communications School at Kansas City, Mo., is helping to fill it.

WANT TO GO FOR A WHIRL?, by Luther Miller. *Railway Progress*, November 1957, pp. 10-15. Federation for Railway Progress, 1430 K st., N.W., Washington, D.C. Single copies, 35c.

Whether you do or not, you're already being taken—to the tune of \$10,000 a day by the Whirlybird Subsidy Club.

BEHIND THE CURTAIN, by R. W. F. Schmidt. *Railway Progress*, December 1957, pp. 10-15. Federation for Railway Progress, 1430 K st., N.W., Washington, D.C. Single copies, 35c.

Some of the people who run the airports (Mr. Schmidt is president of the American Association of Airport Executives and manager of the Tucson Airport Authority), are beginning to have second thoughts about how much the taxpayer will stand still for as more cities begin to take a look.

PAMPHLETS

LOOK TO CANADA FOR EXPANSION. 10 pages, illustrations, map. Canadian National Railways, Research and Development Dept., 407 McGill st., Room 710, Montreal. Free.

An attractive booklet designed primarily for American business firms who may be contemplating plant location in Canada, which, with only 16 million people, already ranks fourth among the trading nations of the world.

DISTRIBUTION OF UNION MEMBERSHIP AMONG THE STATES 1939 AND 1953, by Leo Troy. 32 pages, charts, tables. Occasional Paper 56. National Bureau of Economic Research, Inc., 261 Madison ave., New York 16.

Union membership in the United States has more than doubled since before World War II, but organized labor's numerical strength remains concentrated in a few eastern and midwestern states according to this study, which presents a detailed account of the distribution of union membership among the states in the years 1939 and 1953.

HOW TO TRAVEL BY TRAIN. 31 pages. Association of American Railroads, Transportation Bldg., Washington 6, D.C. Free.

This basic information guide for the railway traveler hopes to take the mystery out of railway travel by explaining such things as dining on trains, fares, Pullman travel, station information, tipping, and all-expense tours.

YOUR COMMUNITY CAN PROFIT FROM THE TOURIST BUSINESS. 25 pages. Office of Area Development, U.S. Department of Commerce. Available from Government Printing Office, Washington 25, D.C. 15c.

A guidebook designed to help communities boost their income levels and create more jobs by promoting the tourist business, this publication concludes that almost all com-

munities have the potentials to attract new tourist business, and outlines in detail the ways and means of going about it. It discusses the manner in which a local tourism promotion committee can organize and operate.

IN GOOD HANDS ALL THE WAY . . . 11 pages. *Railway Express Agency*, Air Express Division, 219 E. 42nd st., New York 17. Free.

Highlights some extremely capable "hands" and the important part they play in air shipping.

BALTIMORE & OHIO TRANSPORTATION MUSEUM. 34 pages, illustrations. Public Relations Department, Baltimore & Ohio Railroad, Baltimore 1.

Designed to serve as a guide to exhibits housed in the Museum at Pratt and Poppleton Streets in Baltimore, this booklet also provides information on the more important exhibition pieces, and includes a list of some Baltimore & Ohio "First's."

BOOKS

RAILWAY CAR BUILDERS OF THE UNITED STATES AND CANADA, by E. Harper Charlton. 93 pages, illustrations. Interurbans, 1416 South Westmoreland ave., Los Angeles 6. \$3.

This is basically a list of car builders, with historical notes pertinent to the firms and some individuals. Many of the companies are no longer in existence but if information on their final disposition was available, it is included. The text is accompanied by numerous photographs illustrating types of cars made by the builders, but the emphasis is on interurban cars.

CASE PROBLEMS IN TRANSPORTATION MANAGEMENT, by George P. Baker and Gayton E. Germane. 523 pages, illustrations, tables, maps. McGraw-Hill Book Company, 330 W. 42nd St., New York 36. \$8.50.

This book includes several good, hard-to-decide problems based on real situations which have confronted air, highway, ocean and railway carriers. The cases cover a variety of functional activities, and are specifically designed to stimulate class discussion. There is no "right answer" for any case; each one provides ample opportunity for discussion and differences in conclusions. A question is given at the end of each case to focus student attention on at least one issue. Cases are grouped under the following headings: selection of equipment; locational selection; allocation and scheduling of equipment; pricing; merchandising; market research; advertising; control; finance; labor relations; and organization. Recent developments included in the cases are purchase of jet aircraft, selection of new ships not yet in service; gas turbine locomotives, railroad piggyback operations, 1955 railroad and steamship organization problems.

DAYLIGHT THROUGH THE MOUNTAIN; LETTERS AND LABOURS OF CIVIL ENGINEERS WALTER AND FRANCIS SHANLY, edited by Frank N. Walker. 442 pages, illustrations, maps. The Engineering Institute of Canada, 2050 Mansfield st., Montreal. Available in U.S. from Pitman Publishing Corp., 2 W. 45th st., New York 36. \$6.

The Shanlys built the Hoosac Tunnel and

numerous Canadian railway lines. Walter Shanly was, at one time, general manager of the Grand Trunk. By means of a selection of letters, consisting chiefly of those from Walter to Frank, this book reveals the record of their activities.

FROM THE MANUFACTURERS

A STUDY FOR MANAGEMENT—THE UNIVAC II DATA AUTOMATION SYSTEM. 196 pages, illustrations. Remington Rand Univac Division, Sperry Rand Corp., Dept RA, 315 Fourth ave., New York 10. Ask for U1352.

A new aid to help top management investigate the electronic computer, the material in this manual is based on the collective experience of hundreds of Univac specialists who have trained management and operating personnel since the first Univac was installed in 1951. Included are a survey of types of data processing systems, considerations for electronic data processing, operations of the Univac system itself, a complete introductory course of Univac programming, and techniques for sorting data on the Univac system and common operational routines.

WHITNEY BLAKE TELEPHONE WIRE AND CABLE. Bulletin T-4. 22 pages. Whitney Blake Co., Dept RA, New Haven 14. Free. Address requests to H. L. Gobeille, Advertising and Sales Promotion Manager.

This catalog provides a complete listing of all Whitney Blake telephone wire products including several new items that have been added to the line in the past two years.

INTERNATIONAL A-LINE HEAVY-DUTY CAB-FORWARD ALL-WHEEL-DRIVE TRUCKS. 8 pages. Consumer-Relations Department, International Harvester Co., Dept RA, 180 N. Michigan ave., Chicago 1. Free. Request Form CR-205-G.

A full-color catalog describing and illustrating six heavy-duty International all-wheel-drive truck models of cab-forward design. Included are the four-wheel-drive International models AC-170 (4x4) and AC-180 (4x4) with GVW ratings of 18,000 and 20,000 lb respectively, and four six-wheel-drive International models in the ACF-170 (6x6) and ACF-180 (6x6) series with GVW ratings from 22,000 to 33,000 lb. All units described in the catalog are available with either gasoline or LPG engines.

STEEL IN CONCRETE. Sound, color, 16mm, 38-minutes. Modern Talking Picture Service, Dept RA, 3 E. 54th st., New York 22. Free for group showings.

Bethlehem Steel Company has released a new technical film that covers the theory and use of steel reinforcing bars in concrete structures. Actual laboratory demonstrations are conducted to show the effects of stresses and strains upon un-reinforced structures, interpreted and applied by the designing engineer and/or architect.

The film also shows methods used to regulate characteristics of new billet reinforcing steel and discusses the problems of crack control, bond and anchorage which enables steel and concrete to act together as a unit, and ductility which determines the ability of new-billet steel reinforcing bars to be bent safely.

PRECISION ENGINEERED BELLEVILLE SPRINGS. 12 pages, color, illustrations, diagrams and design data. Union Spring & Manufacturing Co., Dept RA, New Kensington, Pa.

Contains information on use of coned disc springs, including formulae for linear load-deflection curve springs.

RESEARCH THAT WON A MEDAL



This year, for the first time, The Franklin Institute's coveted George R. Henderson Medal—awarded for achievements in research in railroad technology — was *not* given to an individual inventor or engineer. It was awarded to an association—the Association of American Railroads.

This award honors the contributions made by the Association's Mechanical and Engineering Divisions to the advancement of railroad safety, progress and efficiency.

These contributions are reflected in 92 patents which have resulted from the Association's research. Currently, the Association has some 96 projects under way at its research center on the campus of the Illinois Institute of Technology in Chicago. And it is planning additional facilities to expand this research.

The railroad industry will continue its scientific research to provide transportation service that is constantly increasing in efficiency and economy.

ASSOCIATION OF AMERICAN RAILROADS
Washington, D. C.

SAVINGS FACTS:



FACT No. 1

Barber Stabilized Trucks save maintenance costs. When it's necessary to service Barber parts, the friction castings and side springs are removed and replaced 5 to 10 times faster than those of any competitive truck.



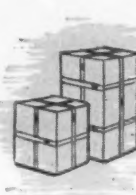
FACT No. 2

Barber Stabilized Trucks protect your equipment. Their unique system of suspension absorbs and eases . . . by friction . . . the destructive vertical shocks and bouncing as well as the lateral forces which usually result in dangerous nosing and swivelling.



FACT No. 3

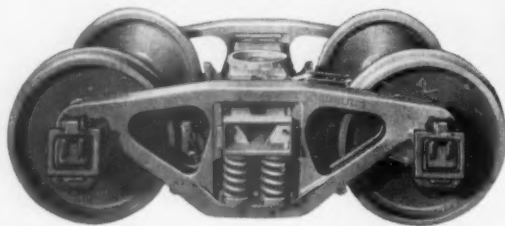
Simplicity and durability in action! Barber's three sturdy parts . . . the special *friction shoe*, the *wear plate* and the *side spring* . . . can be inspected at a quick glance. Fewest possible working parts require less attention, do a better job.



FACT No. 4

Barber Stabilized Trucks save on damage claims. They provide the smoother ride for loadings. Simply stated, Barber Stabilized Trucks provide variable friction for variable loads. No over-solid spring blows! For smoother-riding freight cars, insist on Barber.

Specify Smoother-Riding



BARBER

Stabilized Trucks

Standard Car Truck Company
332 S. Michigan Ave., Chicago 4, Illinois

In Canada
Consolidated Equipment Co., Ltd., Montreal 2

MARKET OUTLOOK *at a glance*

Carloadings Up 11.6% Over Previous Week

Loadings of revenue freight in the week ended December 7 totaled 617,838 cars, the Association of American Railroads announced on December 12. This was an increase of 64,116 cars, or 11.6%, compared with the previous holiday week; a decrease of 120,413 cars, or 16.3%, compared with the corresponding week last year; and a decrease of 103,680 cars, or 14.4%, compared with the equivalent 1955 week.

Loadings of revenue freight for the week ended November 30 totaled 553,722 cars; the summary, compiled by the Car Service Division, AAR, follows:

REVENUE FREIGHT CAR LOADINGS			
For the week ended Saturday, November 30			
District	1957	1956	1955
Eastern	86,581	120,702	122,280
Allegheny	108,154	150,206	142,478
Packhous	48,347	65,260	60,672
Southern	99,898	131,740	132,903
Northwestern	59,206	100,676	83,887
Central Western	109,622	129,050	125,353
Southwestern ..	41,914	54,512	56,213
Total Western Districts	210,742	234,238	265,453
Total All Roads	553,722	752,146	723,786
Commodities:			
Grain and grain products	51,444	51,053	47,167
Livestock	5,663	8,815	11,835
Coal	111,607	152,239	144,561
Coke	8,786	12,931	13,039
Forest Products	29,329	44,373	43,567
Ore	20,325	50,147	26,341
Merchandise l.c.l.	42,980	57,229	61,156
Miscellaneous	283,588	375,359	376,120
November 30 ..	553,722	752,146	723,786
November 23 ..	632,763	650,620	671,950
November 16 ..	647,298	763,898	766,216
November 9 ..	675,273	772,850	792,042
November 2 ...	713,994	800,367	804,261

Cumulative total,
48 weeks ..33,278,928 35,203,955 34,967,490

IN CANADA—Carloadings for the nine-day period ended November 30 totaled 95,378 cars, compared with 76,926 cars for the previous seven-day period, according to the Dominion Bureau of Statistics.

	Loaded Cars Revenue	Connections Rec'd from Total Cars
Totals for Canada:		
November 30, 1957	95,378	36,670
November 30, 1956	109,846	42,376
Cumulative Totals:		
November 30, 1957	3,762,045	1,503,037
November 30, 1956	4,094,344	1,598,633

New Equipment

PASSENGER-TRAIN CARS

► **Chicago Transit Authority.**—Plans \$9,000,000 equipment purchase, including 100 lightweight rapid transit cars and 150 motor buses; 50 cars will be single units to be used mainly in "owl" service on light routes; remaining 50 will be designed for operation as two-car units as first step in CTA program to retire existing trailer cars; salvageable components of 100 retired streetcars will be used in fabricating new cars.

► **Erie.**—Ordered seven depressed-center flat cars from its own shops for delivery in second quarter of 1958; six cars will be 58 ft 4 in. long, with 140-ton capacity, seventh will be 72½ ft long, with 200-ton capacity.

► **Merchants Despatch Transportation Corp.**—Ordered 50 40-ton refrigerator cars, Pacific Car & Foundry; estimated unit cost \$12,295; delivery expected next April.

► **Northern Refrigerator Line.**—Ordered 100 40-ton refrigerator cars, Pacific Car & Foundry; estimated unit cost \$12,295; delivery expected next April.

► **Rock Island.**—Ordered 10 70-ton covered hopper cars, American Car & Foundry, Division of ACF Industries; unit cost \$10,725; delivery scheduled for next February.

SPECIAL

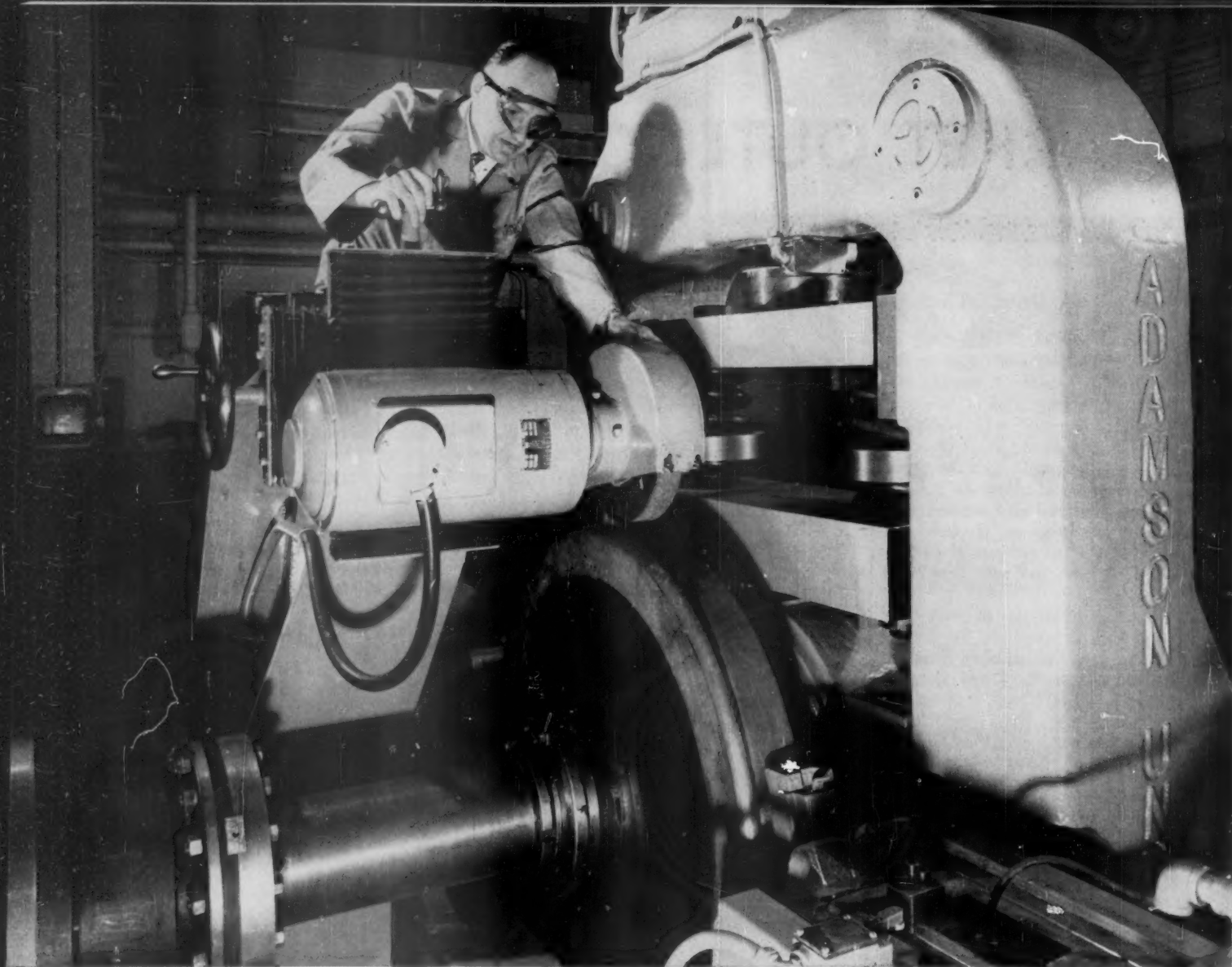
► **Southern Pacific.**—Equipping 49 70-ton gondola cars at Bayshore, Calif., shops for handling coiled tin plate and finished steel products; cars will have removable roofs, movable bulkheads.

New Facilities

► **British Columbia Electric.**—Program for 1958 (cost figures in parentheses) includes: construction of generating units at Bridge River development, first of four units to be in service by May 1959 (\$30,800,000); completion of gas turbine electrical generating plant, Fort Mann (\$7,600,000); land clearing and civil engineering work at Ioco, site of new thermal electric plant (\$3,200,000); completion of second submarine cable circuit to Vancouver Island, additional work on electrical generating stations, transmission lines, substations and distribution facilities for the island (\$9,300,000); construction of new natural gas trunk lines, distribution mains and accessory plant on lower mainland (\$5,100,000).

► **Cotton Belt.**—Placed order with Union Switch & Signal-Division of Westinghouse Air Brake Company for installation of car retarders and signaling equipment in new Pine Bluff, Ark., classification yard (Railway Age, July 8, p. 51); featured in the completely automatic yard will be US&S's VELAC automatic classification yard system.

► **Railroads Big Electronics Purchasers.**—"The railroad industry is the second-ranking purchaser of communications equipment," according to "Electronics"; a survey by the magazine says railroads are "spending \$34 million (Continued on page 47)



How much can a railroad wheel take?

This unique wheel testing machine was specially designed and built to determine just that. Located at United States Steel's new Applied Research Laboratory at Monroeville, Pa., the huge inertia dynamometer can both simulate and exaggerate the loading, braking and tracking conditions of actual service.

Wheels can be tested at speeds equivalent to *160 miles per hour*, and at more than twice the energy loads encountered in present railroad practice. A maximum energy of 68,500,000 foot-pounds can actually be imparted to a test wheel . . . enough energy to lift a 34,000-ton ocean liner one foot from a dry-dock cradle. Moreover, radial loads up to 40,000 pounds can be imposed on the journal of the test wheel and axle.

With this testing machine, we can determine the limitations of today's railroad wheels. We can evaluate how changes in steel compositions, modifications in wheel design, and different heat treatments affect wheel performance. Consequently, we are able to provide the railroads with safer, smoother-riding, longer-lasting *Wrought Steel Wheels*. What's more, we are preparing the industry for the even more stringent demands of the future.

USS Wrought Steel Wheels are produced at two strategically located plants: The McKees Rocks (Pittsburgh), Pennsylvania plant, serving the East and Southeast; and the Gary, Indiana plant, supplying the Western and Southwestern lines.

Watch the *United States Steel Hour* on TV every other Wednesday (10 p.m. Eastern time).

UNITED STATES STEEL CORPORATION, PITTSBURGH, PA. • COLUMBIA-GENEVA STEEL DIVISION, SAN FRANCISCO
TENNESSEE COAL & IRON DIVISION, FAIRFIELD, ALA. • UNITED STATES STEEL EXPORT COMPANY, NEW YORK



USS WROUGHT STEEL WHEELS



U N I T E D S T A T E S S T E E L

MARKET OUTLOOK (continued)

[in that field] in 1957 . . . plan to spend \$45.6 million in 1960. The same industry also ranks as runner-up buyer of data processing equipment, spending \$17 million in 1957 and [planning to spend] \$12 million in 1960."

► **Union Pacific.**—Omaha-Kansas City long-distance direct dialing telephone system will be cut into operation January 1; program will be expanded throughout UP system during 1958; recent new installations extended direct dialing service to Laramie, Wyo., Rawlins and Green River, Salt Lake City, Utah, and Denver, Colo.

Purchases & Inventories

► **Nine Months' Purchases Up 0.6%.**—Purchases by domestic railroads of all types of materials in this year's first nine months were \$10,599,000, or 0.6% higher than in comparable 1956 period; purchase and inventory estimates in following tables were prepared by Railway Age.

PURCHASES*	September 1957	Nine Months 1957	Nine Months 1956
	(000)	(000)	(000)
Equipment**	\$ 30,942	\$ 396,871	\$ 363,139
Rail	6,329	84,193	68,446
Crossties	6,609	63,632	62,718
Other Material	94,152	928,398	940,587
Total from Manufacturers	\$138,032	\$1,473,094	\$1,434,890
Fuel	33,513	324,881	352,486
Grand Total	\$171,545	\$1,797,975	\$1,787,376

* Subject to revision.

** Estimated value of orders.

INVENTORIES*†	September 1, 1957	September 1, 1956
	(000)	(000)
Rail	\$ 57,001	\$ 46,972
Crossties	97,758	88,603
Other Material	537,687	553,840
Scrap	22,779	22,256
Fuel	29,995	30,206
Total	\$745,220	\$741,877

* Subject to revision.

† All total inventory figures taken from ICC statement M-125 for month indicated.

(Continued from page 12)

"Pressures for such expansion still exist," he points out, and stepped-up merchandising of industrial sites can pay big dividends for railroads in spite of spotty downturns in business. He says, for example, that many industrial firms, especially in the East, are in old buildings. Present cost trends and competition tend to force abandonment of such facilities in favor of more modern plants.

With an eye to the development possibilities of railroad real estate, Mr. Warnecke is studying the entry of his own firm into this field. The approach would involve working with individual railroads to plan, set up and sell industrial parks.

This plan, in which at least one mid-western road has expressed interest, would set the stage for what Mr. Warnecke calls "controlled development." Industrial park areas would be engineered in detail, with trackage, streets and utilities, and the War-

necke firm would use its existing sales organization to merchandise such locations to industry.

This approach would meet the need for greater control in the overall development of industrial areas, Mr. Warnecke says. He suggests the need to locate firms in each area which will provide a maximum "community of interests."

Super-Dome Lounge Cars Added to 'City of Denver'

Super-dome lounge cars went into regular service on the Union Pacific-Milwaukee "City of Denver" December 1 between Denver and Chicago.

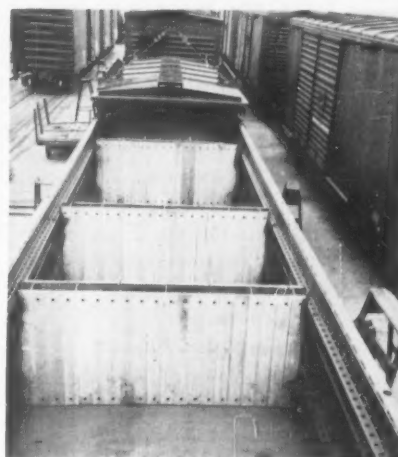
The two full-length dome cars, Milwaukee-owned, were made available for "City of Denver" runs by the Milwaukee's consolidation of the "Olympian Hiawatha" and "Afternoon Hiawatha" as far as Minneapolis-St. Paul.

Sentiment for User Charges Noted by Rothschild

The Department of Commerce's study of user charges on inland waterways "is set in a background of growing public sentiment that the general taxpayer should not be continuously called on to carry all the costs of special services rendered by the government to individual segments of the economy."

The under secretary of commerce for transportation, Louis S. Rothschild, made that statement in announcing that the department has got under way with the study requested by the Bureau of the Budget (Railway Age, Dec. 2, p. 7). Mr. Rothschild also said that the department would have the "close cooperation" of other interested federal agencies, including the ICC. The latter also got the Budget Bureau's request that legislative proposals for user charges be submitted by February 1, 1958.

"Reexamination of the long-established policy on use of inland waterway facilities without charge," Mr. Rothschild said, "appears warranted in view of the fact that the pattern of modern transportation is materially different from that existing when Congressional policy regarding water transportation was first adopted. Even though a policy for waterway user charges is related to general policies regarding user charges, the many factors involved in the provision and use of waterway facilities presents a special problem calling for close and objective consideration."



UP Gons Trim to Load, Climate

Ten "weather-proofed" cars are being completed by the Union Pacific at its Omaha shops to handle coiled tin plate and miscellaneous steel products. The 65-ton gondolas have three-section movable box car roofs with metal grating running-boards and brackets for crane handling. Four bulkheads, adjustable at one-inch intervals, are made from steel channels faced on both sides with two-inch planking.

Freight Operating Statistics of Large Railways—Selected Items

Region, Road and Year	New Eng. Region	Locomotive Miles				Car Miles		Ton-miles (thousands)		Road-loos on line		Per cent B.O.
		Miles of road operated	Train miles	Principal and helper	Light	Loaded (thou- sands)	Per cent loaded	Gross excl. locos & tenders	Net rev. and non-rev.	Serviceable	B.O.	
Boston & Maine.....	1957	1,560	221,211	221,596	4,404	8,203	63.9	559,480	231,549	79	2	1.2
1956		1,561	220,907	225,974	9,170	9,080	68.0	591,350	251,748	65	4	5.8
N. Y., N. H. & Hud.....	1957	1,739	255,703	255,703	16,886	10,482	66.2	686,068	292,199	90	7	7.2
1956		1,740	249,889	249,889	20,088	11,263	69.3	702,168	297,344	89	9	9.2
Delaware & Hudson.....	1957	771	163,205	168,801	6,675	8,903	67.6	638,450	338,244	40	3	7.0
1956		771	176,902	181,786	5,940	9,736	72.5	664,339	355,232	36	4	10.0
Del., Lack. & Western.....	1957	928	242,170	249,723	18,013	11,409	69.3	747,392	324,323	62	1	1.6
1956		962	287,388	298,583	23,738	13,175	70.8	857,911	387,990	62	1	1.6
Erie.....	1957	2,207	559,536	562,843	13,631	30,678	67.8	1,951,773	769,680	172	1	.6
1956		2,207	602,419	607,786	21,388	33,912	69.7	2,092,928	852,618	171	1	.6
Grand Trunk Western.....	1957	951	199,942	209,336	1,429	6,394	61.0	461,567	193,691	51	15	18.5
1956		951	254,762	262,495	1,917	7,721	61.0	559,718	238,659	58	17	22.7
Lehigh Valley.....	1957	1,133	213,338	216,361	4,118	9,596	66.0	663,720	308,494	32	2	5.9
1956		1,135	229,153	231,997	6,085	10,852	66.4	758,687	359,838	32	2	5.9
New York Central.....	1957	10,570	2,006,415	2,029,351	97,860	85,212	58.7	6,380,250	2,854,762	466	6	25.0
1956		10,565	2,224,997	2,257,920	99,124	96,689	63.0	6,965,322	3,231,498	460	18	69.12.6
New York, Chic. & St. L.....	1957	2,155	649,451	663,568	4,615	28,433	64.5	2,025,031	913,359	163	11	8.9
1956		2,155	711,448	736,017	8,764	31,440	67.4	2,180,655	1,029,063	182	5	17.8.3
Pitta. & Lake Erie.....	1957	221	60,615	60,615	.....	2,547	66.4	231,783	144,113	17	.....	.....
1956		221	63,722	63,722	.....	2,971	68.4	255,347	160,321	13	.....	.....
Wabash.....	1957	2,379	492,178	495,001	5,918	21,658	64.2	1,463,610	577,188	111	1	.9
1956		2,381	506,310	509,339	5,765	22,952	67.6	1,502,359	608,299	108	3	2.7
Baltimore & Ohio.....	1957	5,896	1,460,719	1,612,451	134,658	61,111	60.7	5,028,858	2,476,150	460	32	47.8.7
1956		5,910	1,590,571	1,776,436	163,465	65,223	64.2	5,304,240	2,685,380	481	20	78.13.5
Bessemer & Lake Erie.....	1957	208	55,911	62,239	160	2,824	60.7	341,032	223,409	17	.....	.....
1956		208	54,025	57,315	133	2,731	60.6	321,520	207,652	16	.....	.....
Central RR Co. of New Jersey.....	1957	612	116,708	117,827	6,179	4,320	64.4	332,527	174,704	69	3	4.2
1956		612	128,561	129,753	6,375	5,173	67.2	390,826	210,436	65	2	3.0
Chicago & Eastern Ill.....	1957	862	111,605	111,605	2,892	4,886	64.0	364,715	174,157	24	3	3.7
1956		868	115,209	115,209	2,520	5,336	68.1	388,553	197,923	25	3	10.7
Elgin, Joliet & Eastern.....	1957	236	81,632	83,178	.....	2,464	61.9	204,761	111,000	37	2	4.9.3
1956		236	92,717	93,582	.....	3,047	64.9	248,272	137,248	38	2	5.0
Pennsylvania System.....	1957	9,913	2,892,768	3,095,071	250,043	124,830	64.9	9,375,518	4,577,476	860	38	191.17.5
1956		9,892	3,011,384	3,231,834	255,399	133,087	68.8	9,647,025	4,846,728	883	1	323.26.8
Reading.....	1957	1,303	324,686	326,770	12,101	12,463	61.2	1,049,356	562,241	163	18	10.5.2
1956		1,303	351,129	353,657	11,754	14,065	66.6	1,130,007	625,306	162	7	20.15.6
Western Maryland.....	1957	846	162,563	162,563	8,303	6,924	63.9	591,171	342,027	53	.....	.....
1956		846	169,259	177,425	11,375	7,067	66.8	590,242	344,766	41	.....	.....
Chesapeake & Ohio.....	1957	5,067	1,517,962	1,523,782	30,377	70,154	54.5	6,493,661	3,640,685	610	3	74.10.8
1956		5,067	1,546,729	1,579,302	47,015	69,887	57.1	6,266,518	3,552,923	533	26	88.13.6
Norfolk & Western.....	1957	2,110	689,210	757,241	61,098	36,895	55.6	3,594,773	1,976,975	240	14	4.2
1956		2,110	735,566	795,543	69,405	37,739	59.2	3,573,968	2,001,837	219	5	21.8.6
Atlantic Coast Line.....	1957	5,283	629,700	629,715	7,081	21,873	58.0	1,685,664	765,021	104	29	2.1.5
1956		5,283	766,676	766,676	8,394	23,620	60.4	1,780,517	823,075	168	7	4.0
Central of Georgia.....	1957	1,730	179,618	179,618	1,846	7,627	66.1	552,601	270,464	32	.....	.....
1956		1,731	193,789	193,789	2,186	7,838	67.5	553,212	269,782	34	1	2.9
Florida East Coast.....	1957	571	99,040	99,040	.....	3,076	53.5	240,462	90,752	53	7	11.7
1956		571	89,725	89,725	.....	3,038	53.0	238,790	90,345	46	.....	.....
Gulf, Mobile & Ohio.....	1957	2,717	258,547	258,547	194	14,823	67.0	1,046,885	503,805	85	.....	.....
1956		2,717	271,115	271,115	230	15,884	71.2	1,079,826	528,905	83	.....	.....
Illinois Central.....	1957	6,498	1,082,148	1,082,148	30,598	47,123	61.1	3,531,591	1,649,115	253	56	54.14.9
1956		6,503	1,170,419	1,172,499	33,575	50,982	64.3	3,714,446	1,779,035	316	7	115.26.3
Louisville & Nashville(*).....	1957	5,686	1,016,261	1,020,562	17,643	36,538	60.4	2,817,311	1,418,952	160	.....	.....
1956		5,698	1,029,925	1,038,464	18,305	39,204	64.5	2,892,609	1,488,015	224	21	15.5.8
Seaboard Air Line.....	1957	4,049	558,547	558,547	1,273	21,416	59.2	1,629,031	729,597	141	.....	.....
1956		4,051	573,304	573,304	486	22,269	64.3	1,596,466	760,341	136	9	6.2
Southern.....	1957	6,251	826,571	826,641	10,027	38,792	67.0	2,598,097	1,217,207	193	.....	.....
1956		6,259	868,890	868,950	11,837	42,427	68.9	2,769,271	1,301,721	188	5	6.0
Chicago & North Western (†).....	1957	9,252	862,972	862,972	8,578	32,540	60.5	2,414,323	1,025,010	172	7	3.9
1956		9,295	830,833	831,706	11,329	36,683	67.2	2,568,964	1,110,324	183	7	10.0
Chicago Great Western.....	1957	1,437	128,072	128,072	169	7,397	65.8	525,601	245,044	29	.....	.....
1956		1,437	133,002	133,002	196	8,224	72.3	546,749	262,929	31	.....	.....
Chic., Milw., St. P. & Pac.....	1957	10,587	944,025	958,608	16,974	43,927	61.6	3,067,338	1,308,705	286	.....	.....
1956		10,621	1,058,310	1,076,976	19,102	48,758	63.6	3,359,735	1,475,295	290	1	13.4.3
Duluth, Mabee & Iron Range.....	1957	567	150,993	151,605	1,079	7,497	51.0	805,186	490,162	70	3	9.11.0
1956		569	153,854	154,807	2,132	7,547	50.1	767,585	463,453	60	.....	.....
Great Northern.....	1957	8,273	1,089,619	1,094,037	23,467	45,527	63.4	3,439,634	1,662,603	248	53	2.7
1956		8,274	1,280,892	1,285,858	39,417	53,443	64.4	4,091,733	2,055,909	284	29	12.7
Minneapolis, St. P. & S. Ste. M.....	1957	4,169	416,494	417,658	1,606	13,756	63.1	976,834	444,675	85	8	6.1
1956		4,171	406,955	408,674	1,719	15,622	64.7	1,106,610	526,239	83	2	6.6
Northern Pacific.....	1957	6,534	809,419	819,931	19,133	34,336	63.0	2,417,317	1,054,871	247	50	8.2.6
1956		6,569	880,424	895,848	24,616	38,759	67.2	2,666,373	1,223,895	273	31	28.8.4
Spokane, Portland & Seattle.....	1957	944	137,515	137,515	1,331	6,190	74.6	409,308	198,132	54	.....	.....
1956		946	150,548	150,548	1,437	6,927	78.0	454,992	229,144	55	.....	.....
Atch., Top. & S. Fe (incl. G. C. & S. F. and P. & S. F.).....	1957	13,172	2,167,632	2,304,925	43,104	99,718	64.8	6,757,972	2,600,124	556	26	102.14.9
1956		13,124	2,297,011	2,403,895	46,393	109,902	67.9	7,225,009	2,889,414	556	48	57.8.6
Chic., Burl. & Quincy.....	1957	8,728	1,112,983	1,108,045	24,861	48,708	63.2	3,267,244	1,342,769	170	25	31.13.7
1956		8,771	1,155,292	1,151,620	25,748	54,904	69.2	3,546,021	1,557,218	193	21	11.9
Chic., Rock I. & Pac.....	1957	7,614	897,888	898,915	2,789	34,419	61.5	2,516,889	1,055,269	178	.....	.....
1956		7,580	912,641	906,860	1,831	36,177	64.9	2,546,413	1,111,581	169	.....	.....
Denver & R. G. Wn.....	1957	2,155	344,802	370,348	43,731	16,709	67.9	1,156,242	529,779	87	4	3.2
1956		2,155	336,164	360,398	38,588	17,610	73.8	1,161,878	555,962	86	9	5.0
Southern Pacific.....	1957	8,035	2,043,931	2,127,385	126,383	96,171	63.4	6,693,594	2,669,839	707	87	21.2.6
1956		8,044	2,202,236	2,300,886	173,948	104,713	65.5	7,152,941	2,916,304	684	63	77.9.3
Union Pacific.....	1957	9,786	2,337,333	2,395,425	100,000	113,105	63.6	7,614,220	3,064,338	432	39	73.13.4
1956		9,797	2,481,839	2,544,428	125,840	119,613	67.3	7,805,778	3,232,966	447	16	107.18.8
Western Pacific.....	1957	1,190	259,307	279,415	14,257	11,904	63.8	805,909	333,858	46	.....	.....
1956		1,190	272,388	283,986	12,415	13,011	70.8	844,999	381,744			

For the Month of September 1957 Compared with September 1956

Region, Road and Year	Freight cars on line			Per Cent R.O.	G.t.m. per train-br.		G.t.m. per train-mi.	Net ton-mi. per train-mile	Net ton-mi. per car-day	Car miles per car-day	Net daily ton-mi. per road-mi.	Train-miles per train-hour	Miles per loco. per day
	Home	Foreign	Total		and tenders	excl. locos.							
New England Region													
Boston & Maine.....	1957	1,912	8,291	10,203	2.2	38,726	2,537	1,050	28.2	764	42.4	4,948	15.3
1956	1,541	8,936	10,477	2.3	39,492	2,688	1,144	27.7	828	43.9	5,376	14.8	
N. Y., N. H. & Hfd.....	1957	2,691	14,328	17,019	2.9	42,826	2,683	1,143	27.9	596	32.3	5,601	16.0
1956	2,092	15,591	17,683	3.0	43,131	2,810	1,190	26.4	579	31.7	5,696	15.3	
Great Lakes Region													
Delaware & Hudson.....	1957	2,363	6,001	8,364	4.7	66,679	3,930	2,082	38.0	1,366	53.2	14,624	17.0
1956	1,492	6,148	7,640	5.7	64,287	3,774	2,018	36.5	1,452	54.9	15,358	17.1	
Del., Lack. & Western.....	1957	4,862	10,856	15,718	4.7	55,101	3,140	1,363	28.4	661	33.5	11,650	17.9
1956	3,363	11,754	15,117	2.5	51,520	3,037	1,373	29.4	838	40.1	13,444	17.3	
Erie.....	1957	9,286	19,015	28,301	3.3	71,965	3,522	1,389	25.1	906	53.3	11,625	20.6
1956	5,673	21,273	26,946	2.5	69,126	3,514	1,431	25.1	1,114	63.6	12,877	19.9	
Grand Trunk Western.....	1957	5,025	7,465	12,490	7.2	50,638	2,319	973	30.3	511	27.7	6,789	22.0
1956	3,820	9,000	12,820	6.9	49,184	2,219	946	30.9	625	33.2	8,365	22.4	
Lehigh Valley.....	1957	4,048	9,767	13,815	5.1	68,418	3,143	1,461	32.1	743	35.0	9,076	22.0
1956	4,590	9,773	14,363	4.1	68,978	3,373	1,600	33.2	846	38.4	10,568	20.8	
New York Central.....	1957	52,857	79,875	132,732	3.4	53,226	3,217	1,439	33.5	702	35.7	9,003	16.7
1956	48,858	92,491	141,349	2.6	51,845	3,196	1,483	33.4	742	35.3	10,196	16.6	
New York, Chic. & St. L.....	1957	8,913	16,624	25,537	8.6	54,976	3,162	1,426	32.1	1,175	56.7	14,128	17.6
1956	5,994	20,256	26,250	5.3	50,701	3,153	1,488	32.7	1,292	58.6	15,917	16.5	
Pitta. & Lake Erie.....	1957	4,563	8,223	12,786	6.9	60,016	3,831	2,382	54.4	362	10.9	21,737	15.7
1956	3,030	9,548	12,578	4.9	59,927	4,041	2,537	54.0	437	11.8	24,181	15.0	
Wabash.....	1957	9,349	10,626	19,975	4.5	64,351	2,984	1,177	26.7	973	56.9	8,087	21.6
1956	8,730	10,736	19,466	4.9	64,302	2,981	1,207	26.5	1,047	58.5	8,516	21.7	
Central Eastern Region													
Baltimore & Ohio.....	1957	49,661	42,249	91,910	8.5	52,713	3,505	1,726	40.5	884	35.9	13,999	15.3
1956	47,433	53,844	100,917	5.9	52,087	3,402	1,723	41.2	874	33.1	15,146	15.6	
Bessemer & Lake Erie.....	1957	4,883	840	5,723	8.1	110,010	6,243	4,090	79.1	1,372	28.6	35,803	18.0
1956	3,687	1,444	5,131	7.4	99,696	6,129	3,958	76.0	1,291	28.0	33,278	16.8	
Central RR Co. of New Jersey.....	1957	2,517	9,694	12,211	10.0	40,871	2,957	1,553	40.4	484	18.6	9,515	14.3
1956	2,911	10,689	13,600	6.7	42,476	3,170	1,707	40.7	527	19.7	11,462	14.0	
Chicago & Eastern Ill.....	1957	2,789	3,499	6,288	12.4	59,682	3,280	1,602	36.5	948	40.7	6,889	18.3
1956	2,081	4,056	6,137	8.7	54,610	3,389	1,726	37.1	1,129	44.7	7,601	16.2	
Elgin, Joliet & Eastern.....	1957	7,280	8,727	16,007	6.1	21,360	2,669	1,447	45.0	225	8.1	15,678	8.5
1956	5,902	9,473	15,375	4.8	21,794	2,806	1,551	45.0	303	10.4	19,385	8.1	
Pennsylvania System.....	1957	97,261	101,054	198,315	9.5	54,716	3,334	1,628	36.7	776	32.6	15,392	16.9
1956	103,562	90,537	194,099	6.4	51,130	3,298	1,657	36.4	833	33.2	16,332	16.0	
Reading.....	1957	12,301	19,031	31,332	4.7	51,614	3,232	1,732	45.1	578	21.0	14,383	16.0
1956	9,588	23,731	33,319	3.3	50,759	3,219	1,781	44.5	634	21.4	15,997	15.8	
Western Maryland.....	1957	4,868	4,350	9,218	2.5	53,509	3,746	2,167	50.9	1,344	42.0	13,476	14.7
1956	3,156	4,701	7,857	3.0	51,308	3,582	2,092	48.8	1,453	44.6	13,584	14.7	
Potomac Region													
Chesapeake & Ohio.....	1957	57,148	32,584	89,732	7	82,859	4,306	2,414	51.9	1,309	46.3	23,950	19.4
1956	46,140	33,960	80,100	9	77,097	4,083	2,315	50.8	1,455	50.1	23,373	19.0	
Norfolk & Western.....	1957	37,661	10,421	48,082	1.0	91,099	5,346	2,940	53.6	1,414	47.5	31,232	17.5
1956	30,972	10,081	41,053	8	84,661	4,977	2,788	53.0	1,577	50.2	31,625	17.4	
Southern Region													
Atlantic Coast Line.....	1957	21,178	17,666	38,844	2.8	48,286	2,683	1,217	35.0	666	32.8	4,827	18.0
1956	16,821	18,423	35,244	4.5	45,450	2,332	1,078	34.8	782	37.2	5,193	19.6	
Central of Georgia.....	1957	2,694	6,367	9,061	3.4	53,371	3,081	1,508	35.5	1,006	42.9	5,211	17.3
1956	2,273	7,428	9,701	2.8	49,161	2,857	1,393	34.4	942	40.5	5,195	17.2	
Florida East Coast.....	1957	493	3,542	4,035	1.0	42,120	2,451	925	29.5	801	50.7	5,298	17.3
1956	284	3,191	3,475	3	44,090	2,422	1,002	29.7	922	58.5	5,274	16.6	
Gulf, Mobile & Ohio.....	1957	5,750	11,915	17,665	6.3	75,511	4,052	1,950	34.0	1,021	44.8	6,181	18.6
1956	4,461	11,194	15,655	6.4	74,988	3,985	1,952	33.3	1,133	47.8	6,489	18.8	
Illinois Central.....	1957	25,090	27,912	53,002	2.0	55,509	3,293	1,538	35.0	1,063	49.7	8,460	17.0
1956	21,842	27,974	49,816	2.1	52,784	3,214	1,539	34.9	1,206	53.7	9,119	16.6	
Louisville & Nashville(*).....	1957	30,355	19,136	49,491	5.8	50,714	2,778	1,399	38.8	813	34.7	8,318	18.3
1956	24,994	19,789	44,783	4.1	50,311	2,815	1,448	38.0	747	30.5	8,703	17.9	
Seaboard Air Line.....	1957	13,494	13,200	26,694	4.8	54,346	2,973	1,332	34.1	908	45.0	6,006	18.6
1956	11,025	16,599	27,624	2.3	51,391	2,828	1,347	34.1	928	42.3	6,255	18.5	
Southern.....	1957	16,620	25,163	41,783	4.9	52,909	3,157	1,479	31.4	976	46.5	6,491	16.8
1956	14,751	24,438	39,189	4.0	54,384	3,198	1,503	30.7	1,092	51.7	6,933	17.1	
Northwestern Region													
Chicago & North Western (†).....	1957	21,310	30,665	51,975	5.2	49,089	2,822	1,198	31.5	630	33.0	3,693	17.5
1956	17,306	42,333	59,639	4.1	50,144	3,148	1,361	30.3	630	31.0	3,982	16.2	
Chicago Great Western.....	1957	2,198	4,621	6,819	3.2	75,086	4,109	1,916	33.1	1,211	55.5	5,684	18.3
1956	1,576	4,763	6,339	2.8	78,219	4,118	1,981	32.0	1,426	61.7	6,099	19.0	
Chic., Milw., St. P. & Pac.....	1957	32,020	29,833	61,853	5.5	62,234	3,260	1,391	29.8	686	37.4	4,120	19.2
1956	28,064	35,339	63,403	6.7	60,003	3,185	1,399	30.3	748	38.9	4,630	18.9	
Duluth, Missabe & Iron Range.....	1957	14,138	850	14,988	5.0	94,406	5,629	3,426	65.4	1,106	33.2	28,816	17.7
1956	13,579	1,023	14,602	3.0	85,211	5,308	3,205	61.4	1,083	35.2	27,150	17.1	
Great Northern.....	1957	24,438	20,510	44,948	2.4	59,656	3,211	1,552	36.5	1,159	50.0	6,699	18.9
1956	21,367	26,703	48,070	2.2	58,294	3,246	1,631	38.5	1,385	55.9	8,283	18.2	
Minneapolis, St. P. & S. Ste. M.....	1957	6,737	8,735	15,472	2.5	48,900	2,359	1,074	32.2	982	43.8	3,555	20.8
1956	6,310	10,164	16,474	4.8	55,138	2,733	1,300	33.7	1,072	49.2	4,206	20.3	
Northern Pacific.....	1957	18,586	17,575	36,161	3.6	60,431	2,996	1,308	30.7	926	47.8	5,381	20.2
1956	17,183	19,184	36,367	4.2	59,471	3,041	1,396	31.6	1,094	51.6	6,210	19.6	
Spokane, Portland & Seattle.....	1957	1,439	4,218	5,657	2.6	44,059	2,992	1,448	32.0	1,083	45.4	6,996	14.8
1956	1,136	5,150	6,306	2.7	44,003	3,041	1,531	33.1	1,226	47.5	8,074	14.6	
Central Western Region													
Atch., Top. & S. Fe (incl. G. C. & S. F. and P. & S. F.).....	1957	53,654	33,467	87,121	6.7	71,885	3,123	1,202	26.1	969	58.5	6,580	23.1
1956	51,786	35,789	87,575	4.0	72,368	3,159	1,263	26.3	1,097	61.4	7,339	23.0	
Chic., Burl. & Quincy.....	1957	19,456	26,525	45,981	3.6	62,793	2,948	1,212	27.6	997	57.2	5,128	21.4
1956	17,989	27,407	45,396	3.2	63,975	3,074	1,350	28.4	1,139	58.1	5,918	20.8	
Chic., Rock I. & Pac.....	1957	13,145	25,788	38,933	4.8	58,107	2,815	1,180	30.7	931	49.3	4,620	20.7
1956	10,742	21,951	32,693	5.6	57,227	2,801	1,223	30.7	1,118	56.1	4,888	20.5	
Denver & R. G. Wn.....	1957	6,729	8,714	15,443	2.4	61,456	3,363	1,541	31.7	1,110	51.6	8,195	18.3
1956	6,725	9,307	16,032	3.4	63,560	3,465	1,658	31.6	1,160	49.8	8,600	18.4	
Southern Pacific.....	1957	31,736	42,672	74,408	1.7	66,041	3,313						



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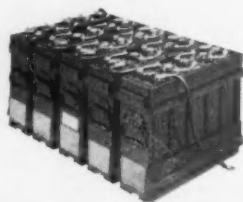
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even greater durability and life

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People in the News



Park M. Roeper
PRR



John D. Morris
PRR

ATLANTIC COAST LINE.—S. H. Reynolds and E. W. Thomas named general agents at Fort Myers, Fla., and Sarasota, respectively.

BANGOR & AROOSTOOK.—Palmer H. Swales, division master mechanic, Oakfield, Me., appointed chief engineer, Houlton, Me., succeeding **Robley H. Morrison**, who resigned to become chief engineer of the **Lake Superior & Ishpeming**, Marquette, Mich. **O. Dole Anthony** named assistant engineer, Houlton. **David G. Merrill** appointed division master mechanic, Oakfield.

ILLINOIS TERMINAL.—James A. Parker appointed general engineer, St. Louis.

NEW YORK CENTRAL.—F. H. McHenry, superintendent diesel terminal, Collinwood, Ohio, appointed master mechanic, Buffalo division, Buffalo, N.Y.

PENNSYLVANIA.—Park M. Roeper, manager, New York region, appointed general manager of transportation, Philadelphia, succeeding **John D. Morris**, who has been appointed by the PRR as its chief representative on a merger study committee for train operation and property maintenance. (Railway Age, Dec. 2, p. 7). **Nathan L. Fleckenstine**, assistant regional manager, New York region, promoted to manager of that region.

L. E. Gingerich, assistant chief engineer—maintenance, appointed chief mechanical officer, Philadelphia, succeeding **Howell T. Cover**, assistant vice-president—chief mechanical officer, who is being given leave of absence. **Donald E. Rudisill**, engineer, maintenance of way and structures, Philadelphia, succeeds Mr. Gingerich as assistant chief engineer—maintenance. **Charles F. Parvin**, regional engineer, Northwestern region, Chicago, succeeds Mr. Rudisill. **Edwin C. Hanly**, superintendent of equipment, Northern region, Buffalo, N.Y., appointed assistant chief mechanical officer—car, Philadelphia, succeeding **Harry M. Wood**, who becomes superintendent of equipment, Philadelphia region. Mr. Wood replaces



Nathan L. Fleckenstine
PRR



L. E. Gingerich
PRR



Donald E. Rudisill
PRR

Edwin C. Hanly
PRR

Hans H. Haupt, appointed assistant to chief mechanical officer. **A. S. Barr**, district engineer, Baltimore, Md., appointed regional engineer, Northwestern region, Chicago, succeeding Mr. Parvin. **Herbert O. Stratton**, track supervisor, Lancaster, Pa., appointed assistant district engineer, New York, succeeding **Joseph J. Baffa**, promoted to Mr. Barr's former post.

E. W. Weddle named chief of police, Northwestern region, Chicago.

SOUTHERN PACIFIC.—**Joseph L. Ba-t, Jr.**, manager of employe relations, Houston, appointed acting assistant public relations manager there.

P. G. Vaughan appointed assistant manager of personnel, San Francisco.

C. M. Buckley, assistant to vice-president—system operations, Chicago, retired November 30.

John N. Cetinich appointed senior assistant division engineer, San Francisco.

J. R. Code, purchasing agent, San Francisco, named purchasing agent, Pacific Lines, there.

G. C. Freeborn, assistant to general purchasing agent, system, appointed assistant general purchasing agent, system, and **D. K. Rose**, assistant purchasing agent, San Francisco, advanced to assistant purchasing agent, Pacific Lines.

G. E. Hinton, assistant general storekeeper, named manager of stores, succeeding **J. M. Day**, who retired November 30.

OBITUARY

William J. Leonard, 63, director of passenger station services, **New York Central System**, New York, died December 4 at his home in Yonkers, N.Y.

Supply Trade

Carleton P. Ross has been elected executive vice-president of the **Ross & White Company**, Chicago. **R. W. Burrill** has been named vice-president-sales.

S. L. Poorman has retired from the **Westinghouse Air Brake Company** where he has been vice-president, sales, of the **Air Brake Division** since 1946. Mr. Poorman was with the company for 45 years, chiefly in sales capacities, following apprenticeship in the engineering department in Wilmerding, Pa., in 1912.

Frank W. Jenks, executive vice-president, **International Harvester Company**, has been elected president, succeeding **Peter V. Moulder**, retired.

Lewis Bolt & Nut Co., Minneapolis, has announced the appointment of **E. T. Brown** as vice-president. In addition to its activities in bolts and nuts, the company has a hot dip galvanizing plant in the Twin City area, and through an arrangement with **Lewis Metal Plating Company** provides service in zinc plating, cadmium, copper, chrome, and other forms of electro-plating.

Oakite drives car washing costs

DOWN DOWN DOWN

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advantage...low-cost end
results*

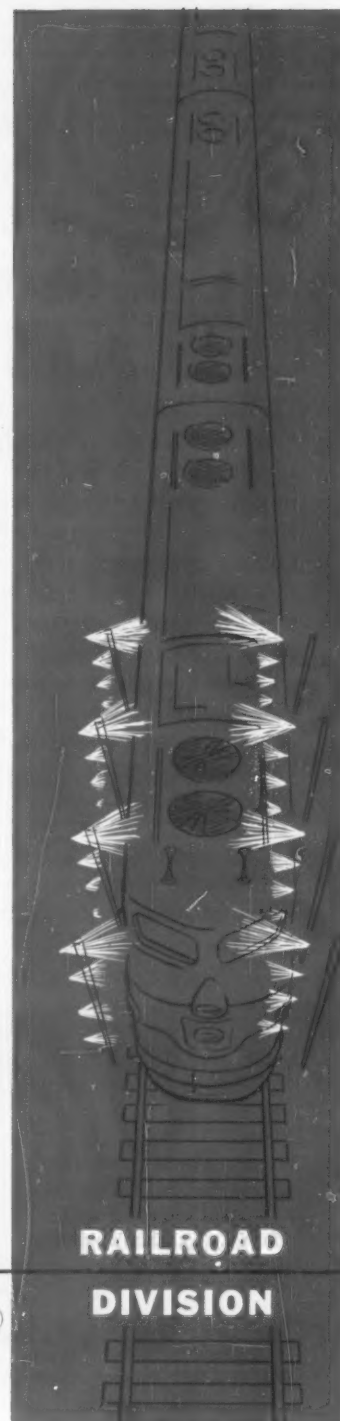
Take this case of car washing, for example. A certain Class I road using a so-called "low-cost-per-pound" cleaner was dissatisfied with results.

They switched to Oakite Compound No. 88 for a month's trial—found they saved over \$2600.

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Facts & Figures *at a glance*

Organizations

AMERICAN ASSOCIATION OF PASSENGER TRAFFIC OFFICERS.—R. T. Anderson, general passenger traffic manager of the Santa Fe, has been elected president of the association to succeed James N. Findlay, passenger traffic manager of Furness Lines. E. R. Comer, general passenger manager of the Pennsylvania, has been elected vice-president, and John A. Barrett, passenger traffic manager of the Wabash, is chairman of the group's seven-man executive committee.

AMERICAN RAILWAY MAGAZINE EDITORS ASSOCIATION.—New officers—in addition to Marshall W. Hamil of the Cotton Belt, recently elected president to succeed Ted J. Zirbes, Jr., of the Rock Island

(Railway Age, Nov. 18, p. 12)—are: Norman M. Stone, New York Central, first vice-president; John E. Coonley, Illinois Central, second vice-president; John J. Knifke, Santa Fe, secretary; and Robert Schiek, Elgin, Joliet & Eastern, treasurer. The executive committee, in addition to the foregoing and Mr. Zirbes, includes Steve Canton, Railway Express Agency; Robert Shaw, Canadian National; and Esther Dawson, Bessemer & Lake Erie.

OHIO VALLEY TRANSPORTATION ADVISORY BOARD.—Elected 1958 officers: General chairman, R. S. Thomas, traffic manager, American Laundry Machinery Company, Cincinnati; vice-chairman, R. W. Ernst, traffic manager, General Plywood Corp., Louisville; general secretary, L. H. Sickman, traffic manager, E. Kahn's Sons Company, Cincinnati.

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"Special" cars for industrial requirements are *standard* procedure here at Thrall. At the same time, "Standard" cars for inter-change service benefit from *special* custom shop construction at interesting prices. How can we offer an attractive proposition on both? Flexible production facilities plus 38 years of developing them pretty well sum it up.

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Westinghouse 500,000-lb. capacity special design flat car. Cast steel underframe. Length over strikers 45'4". Width over all 10'0".

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Standard and The
"Standard" is Special

Ten Months Net Income Was Off \$99 Million

CLASS I RAILROADS—UNITED STATES

	October	
	1957	1956
Total operating revenues..	\$ 927,291,511	\$ 962,669,507
Total operating expenses..	697,566,196	698,815,569
Operating ratio—		
per cent	75.23	72.59
Taxes	106,599,745	122,502,471
Net railway operating income (Earnings before charges)	99,631,473	121,835,853
Net income, after charges (estimated)	82,000,000	105,000,000

	Ten Months Ended October	
	1957	1956
Total operating revenues..	\$8,836,710,505	\$8,787,491,636
Total operating expenses..	6,877,916,693	6,726,548,826
Operating ratio—		
per cent	77.83	76.55
Taxes	934,003,618	933,933,641
Net railway operating income (Earnings before charges)	799,108,842	896,498,491
Net income, after charges (estimated)	617,000,000	716,000,000

Dividends Declared

ALABAMA GREAT SOUTHERN.—common, \$4, semi-annual; 6% participating preferred, \$4, semi-annual, both payable December 24 to holders of record December 3.

ATCHISON, TOPEKA & SANTA FE.—common, 30¢, quarterly, payable March 1 to holders of record January 24; extra, 20¢, payable January 10 to holders of record December 6; 5% non-cumulative preferred, 25¢, quarterly, payable February 1 to holders of record December 27.

BANGOR & AROOSTOOK.—60¢, quarterly, payable December 30 to holders of record December 13.

BEECH CREEK.—50¢, quarterly, payable January 1 to holders of record December 13.

CHICAGO, BURLINGTON & QUINCY.—\$2, payable December 23 to holders of record December 6.

CHICAGO SOUTH SHORE & SOUTH BEND.—15¢, quarterly, payable December 16 to holders of record December 5.

CINCINNATI, NEW ORLEANS & TEXAS PACIFIC.—\$4, semi-annual, payable December 16 to holders of record December 2.

COLORADO & SOUTHERN.—common, \$1; 4% non-cumulative 2nd preferred, \$4, both payable December 30 to holders of record December 16.

DELAWARE & HUDSON.—50¢, quarterly, payable December 28 to holders of record December 11.

KANSAS, OKLAHOMA & GULF.—6% preferred A, \$3, semi-annual; 6% preferred B, \$3, semi-annual; 6% preferred C, \$3, semi-annual, all paid December 2 to holders of record November 22.

NEW YORK & HARLEM.—\$2.50, semi-annual, payable January 1 to holders of record December 13.

NORWICH & WORCESTER.—8% preferred, \$2, quarterly, payable January 2 to holders of record December 16.

READING.—4% 2nd preferred, 50¢, quarterly, payable January 9 to holders of record December 12.

SEABOARD AIR LINE.—62½¢, quarterly, payable December 27 to holders of record December 16.

UNION PACIFIC.—30¢, quarterly, 40¢, extra, both payable January 2 to holders of record December 9.

WESTERN MARYLAND.—common, 75¢, initial dividend; 7% cumulative 1st preferred, \$1.75, quarterly; 5% cumulative 1st preferred, 37½¢, quarterly; non-cumulative 2nd preferred, \$1, quarterly; all payable December 27 to holders of record December 17.

New Securities

CHICAGO & NORTH WESTERN.—Applied to ICC for authority to issue \$1,545,000 of equipment trust certificates, the first installment of a proposed \$3,690,000 issue, the whole of which would finance in part the purchase of 475 freight cars from Pullman-Standard Car Manufacturing Company at an estimated total cost of about \$4,632,000. Included would be 200 mill-type gondolas at an estimated unit cost of \$9,735, and 275 covered hoppers—155 at \$8,915 and 120 at \$10,690. The certificates would mature in 15 annual installments, beginning January 1, 1959. They would be sold by competitive bids which would fix the interest rate.

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BOOKS...

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Should U.S. Do Railroad Research?

The federal government is spending a lot of money on an "operations research" project—to come up with money-saving and time-saving methods of handling freight into and out of ships. The immediate beneficiaries of the project will be the armed services, but commercial ship operations will also profit.

As an operator of naval vessels and airplanes, the government properly spends billions of dollars in research for improved ships and aircraft—and commercial operators of planes and vessels get the benefit of that research, also free of any expense.

There certainly is no occasion for the railroads to develop a dog-in-the-manger attitude toward federal research expenditures which benefit other forms of transportation. If the armed services did not seek constantly to develop improved aircraft and naval vessels, the country would soon be in a sorry fix militarily. And once improved plane and ship equipment has been perfected, it would be foolish and impossible not to introduce these improvements into commercial operations.

At the same time, the fortuitous position of shipping and air transportation, in getting this kind of costly government research aid, adds gravely to the unfavorable competitive position of the railroads, which is serious enough already. Nobody is putting up any money to do technological research of direct benefit to the railroads, except the railroads themselves and the manufacturers of railroad equipment. Of course, government also spends a lot of money in research on highway construction—plus tens of billions on the construction itself.

How can this imbalance in the distribution of governmental favors in transportation be corrected? From the standpoint of simple justice, the easiest way to correct it would be to give the railroads the same rights to engage in highway, water and air transportation as is possessed by other citizens.

But the answer to the problem isn't as simple as that. There is also the fact that railroading is a branch of technology that will respond profitably to intensive research—just as surely as air and water transportation do. Improvement in railroad technology has been spectacular, as it is. If, however, as much money and brains had been available to go into developmental research on railway motive power and rolling stock (for instance), as the billions that have been plowed into the improvement of aircraft, who knows what miracles of transportation economy and speed might now be occurring on the railroads?

The country is rapidly using up its scarce natural resources—e.g., fuel. And railroads, even now, are far more economical of fuel than are aircraft and highway vehicles. In the interest of conservation of the nation's fuel, would it not be a legitimate function of the federal government to seek effective technological means of promoting greater relative use of railroad transportation?

In the country's military defense, railroad service is indispensable—and technological advancement in railroading makes a direct contribution to national defense, the same as does technological improvement in planes and ships.

DEFENSE IS GOVERNMENT'S MAIN BUSINESS: Maybe there are some railroad people and suppliers who would not enjoy seeing the federal government engage deeply in railroad technological research. Such federal research in other branches of transportation does not, however, seem to have been unduly harmful to private companies. Quite the contrary, in fact. National defense is government's most important function, and anything within reason it does to bolster its strength in that sector does not savor of "socialism," but rather of plain horse sense.

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18 PRIVATE CAR LINES

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A.A.R. ALTERNATE STANDARD—SEE MANUAL PAGE D-15-A

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